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ABSTRACT

The Iraq educational system is described along with guidance for academic placement of students in United States educational institutions. Six chapters include: (1) introduction (i.e. background data, historical development, responsibility for education, and language of instruction); (2) institutions supervised by the Ministry of Education (kindergartens, primary schools, intermediate schools, preparatory schools, vocational schools, and teacher training programs); (3) institutions supervised by the Ministry of Higher Education and Scientific Research (i.e. historical development, admission procedures, libraries, and faculty members); (4) institutions supervised by other ministries (i.e. Ministry of Defense, Health, Foreign Affairs, Justice, Planning, and Trade); (5) institutions supervised by international organizations (i.e. Arab Federation for Technical Education, Arab Petroleum Training Institute, and Institute of Arab Research and Studies); and (6) suggestions for admissions officers (i.e. translation of Arabic words, official grade reports, English proficiency, and placement recommendations). Three appendices are: variations in the transliteration of Arabic names and works; variations in the translation of Arabic words; and a list of academic institutions in Iraq. Tables and sample documents are included. Contains five references. (SM)

WORLD EDUCATION SERIES American Association of Collegiate Registrars and Admissions Officers

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IRAQ

James S. Frey

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Iraq

A Study of the Educational System of Iraq and a Guide to the Academic Placement of Students in Educational Institutions of the United States

James S. Frey
Executive Director
Educational Credential Evaluators, Inc.

1988

A Service of the International Education Activities Group of the
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Tribute to

Lucy Hurt McDermott

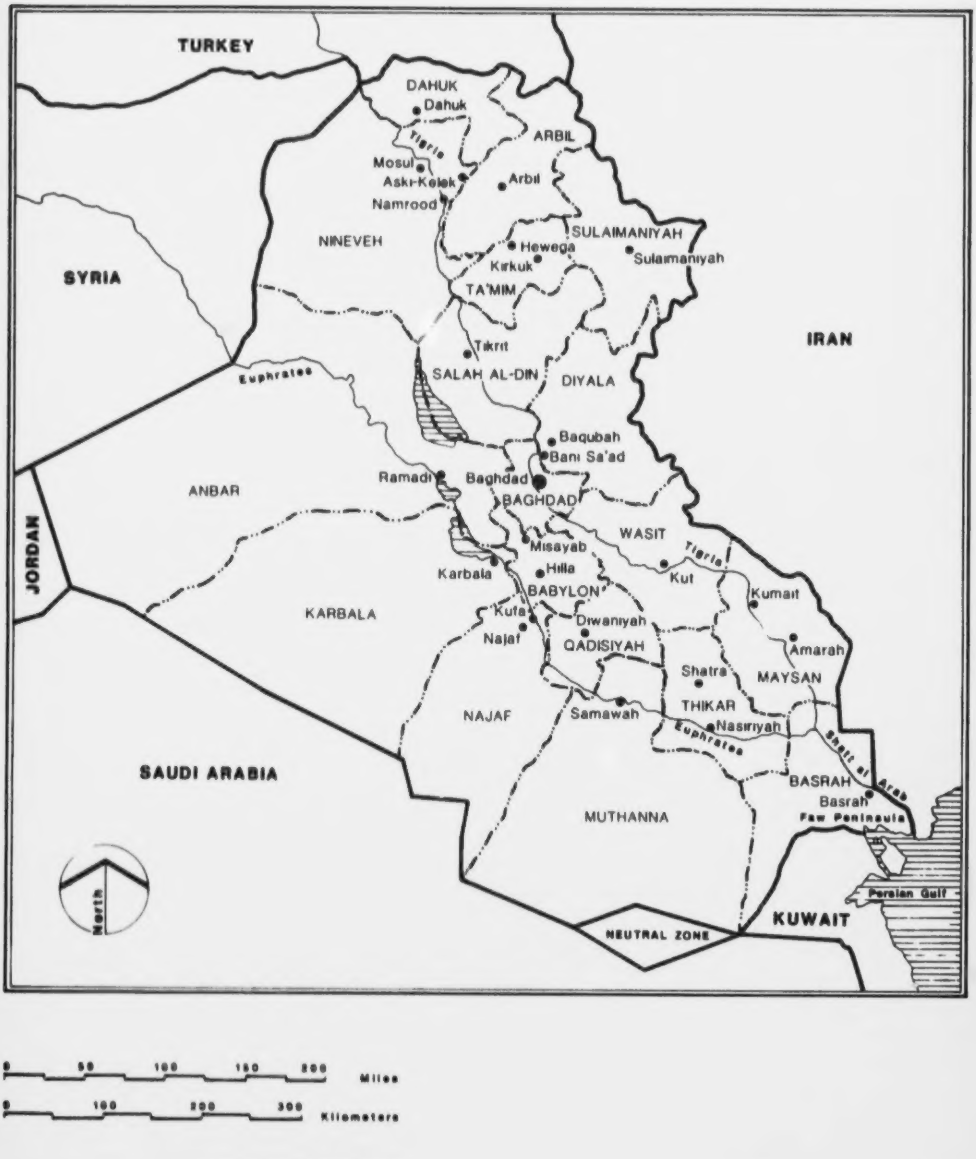
Managing Editor, *World Education Series,* 1976-84

Lucy McDermott's zest for quality in her work was as great as her zest for quality in her professional friendships. And she never let either stand in the way of the other. Those of us in international education who had the privilege of working with her during her eight years at AACRAO as Managing Editor of the *World Education Series* relied heavily upon Lucy's unflagging dedication to quality. Even though the Series produced two or three volumes each year, she considered each book a *magnum opus.* She insisted that those associated with its production, from author to printer, not forget that fact. As a result, we have high quality testaments to that commitment. She insisted on complete indexes. She recognized the need to standardize wording in placement recommendations from volume to volume. She was a superb editor, insisting on simplicity when authors gravitated toward complexity and verbosity.

Everyone who worked with Lucy McDermott delighted in the association. She enjoyed her work, even when it was tedious. Her vision of the final product never wavered, and her enthusiasm often would get us through the final tough days before a book's publication. She was an author herself, with articles occasionally appearing in magazines and newspapers. Lucy could, therefore, empathize with author's struggles, encouraging them by saying, "Nobody knows any more than I do how difficult it is to commit fresh text to that blank sheet of paper." She had a wry sense of humor that came through even in the marginal comments on author's drafts. There never was a conversation with her that didn't include a good dose of laughter.

We who knew, worked with and admired Lucy McDermott are pleased to dedicate to her this volume on the educational system of Iraq.

Friends of Lucy McDermott
September 1988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Preface

This publication is the result of two visits which I made to Iraq, in May 1977 and March 1987. On both occasions I was a guest of the Ministry of Higher Education and Scientific Research. Most of the credit for this book should be given to the staff members of this Ministry, to their colleagues in the Ministry of Education, and to the staff members of the various educational institutions, kindergarten to university, which I was privileged to visit. Without their assistance, it would not have been possible for me to learn much about the educational system and institutions of Iraq.

Credit is also due to the United States Information Agency, especially Jane M. Alden, Chief of the Academic Specialist Program in the Bureau of Educational and Cultural Affairs, who made the arrangements for my second trip. Staff members of the U.S. Information Service in Baghdad made local arrangements and accompanied me on my visits to educational institutions and governmental agencies. Special thanks for the time and energy which they devoted to this task are owed to James L. Bullock, Public Affairs Officer in Baghdad at the time of my second visit; Hanan Kassir, Cultural Assistant; and Mona Kadir, Educational Advisor.

This publication would be less complete and less accurate if assistance had not been provided by some of my colleagues in the United States and Canada. Sample educational credentials were provided by Farhat M. Iftekaruddin, Hattie Jarmon, William J. Paver, D. Diana Reid, and Elaine Zinman-Madoff. Various versions of the manuscript were read and critiqued by Ann S. Fletcher, Dale E. Gough, G. James Haas, Deborah D. Hefferon, Sylvia K. Higashi, June Y. Hirano, Mary Cay Martin, Kitty M. Villa, and Valerie Woolston. A particularly outstanding job was done by William H. Smart. Karen Lukas was an excellent monitor. With her assistance, the organization and readability of this publication have been greatly improved. Henrianne K. Wakefield and Miranda B. Knowles were very helpful and dedicated editors. Margit A. Schatzman and Stephen J. Bleksley designed the map of Iraq and the cover, and prepared the artwork for the educational diagram.

Other very important roles in the preparation of this publication were played by my wife, Margo, who put up with the countless hours I spent glued to the word processor; Ira J. Hamburg, who kept the infernal machine in reasonable operating condition; and my seven co-workers at Educational Credential Evaluators, Inc. (David, Diana, Jean, Jim, Margit, Micki, and Shelley) who worked above and beyond the call of duty to make up for my absences during the research, writing, and editing phases.

James S. Frey
June 1988

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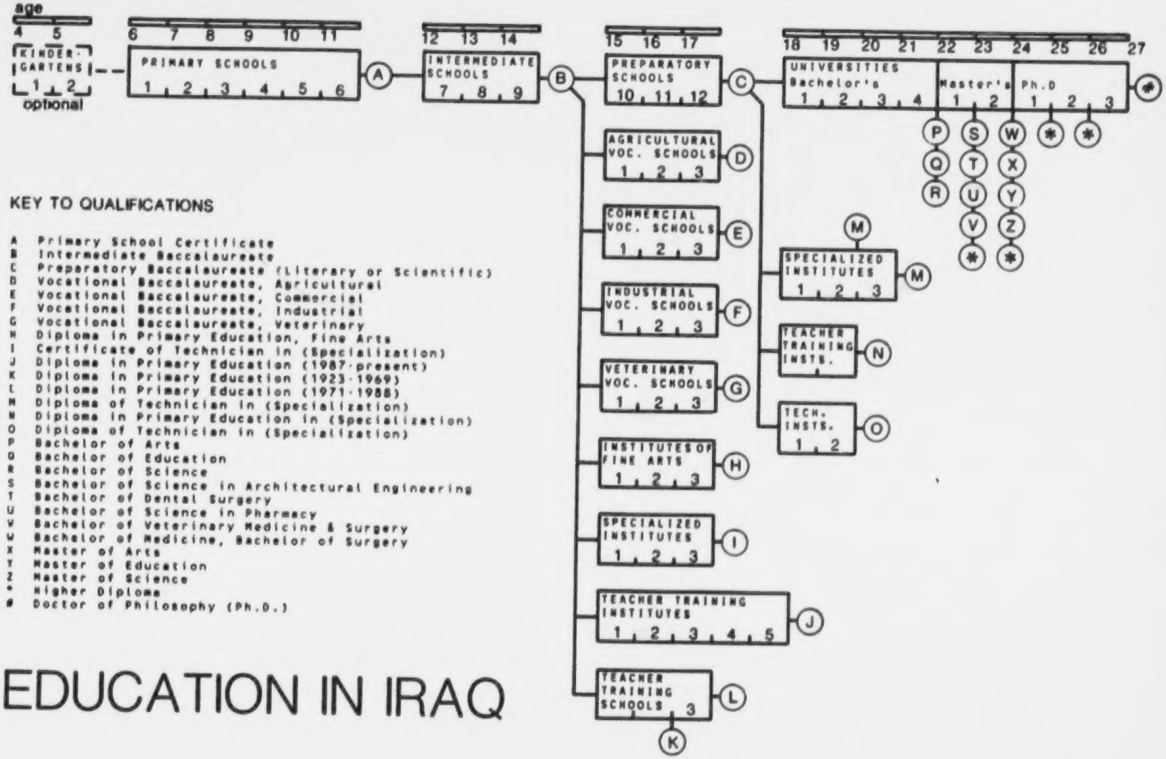
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TEACHER TRAINING INSTS.
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KEY TO QUALIFICATIONS

A	Primary School Certificate
B	Intermediate Baccalaureate
C	Preparatory Baccalaureate (Literary or Scientific)
D	Vocational Baccalaureate, Agricultural
E	Vocational Baccalaureate, Commercial
F	Vocational Baccalaureate, Industrial
G	Vocational Baccalaureate, Veterinary
H	Diploma in Primary Education, Fine Arts
I	Certificate of Technician in (Specialization)
J	Diploma in Primary Education (1987-present)
K	Diploma in Primary Education (1923-1969)
L	Diploma in Primary Education (1971-1988)
M	Diploma of Technician in (Specialization)
N	Diploma in Primary Education in (Specialization)
O	Diploma of Technician in (Specialization)
P	Bachelor of Arts
Q	Bachelor of Education
R	Bachelor of Science
S	Bachelor of Science in Architectural Engineering
T	Bachelor of Dental Surgery
U	Bachelor of Science in Pharmacy
V	Bachelor of Veterinary Medicine & Surgery
W	Bachelor of Medicine, Bachelor of Surgery
X	Master of Arts
Y	Master of Education
Z	Master of Science
*	Higher Diploma
#	Doctor of Philosophy (Ph.D.)

EDUCATION IN IRAQ

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I. Introduction

A. Background Data

Official Name: The Republic of Iraq (Al-Jumhuriya Al-Iraqiya).

Location: Iraq is bordered by Iran, Jordan, Kuwait, Saudi Arabia, Syria, Turkey, and the Persian Gulf.

Size: 168,040 square miles (435,224 square kilometers).

Population: 4.8 million (according to the first official census in 1947), 6.5 million in 1957, 10.7 million in 1974, 12 million (according to the most recent census in 1977), 15 million (estimated in 1986). The most populated cities are Baghdad, Basrah, Kirkuk, and Mosul.

Governorates (Capital Cities): Anbar (Ramadi); Arbil (Arbil); Babylon, formerly called Hilla (Hilla); Baghdad (Baghdad); Basrah (Basrah); Dahuk (Dahuk); Diyala (Baqubah); Karbala (Karbala); Maysan, formerly called Amarah (Amarah); Muthanna (Samawah); Najaf (Najaf); Nineveh, formerly called Mosul (Mosul); Qadisiyah, formerly called Diwaniyah (Diwaniyah); Salah Al-Din (Tikrit); Sulaimaniyah (Sulaimaniyah); Ta'mim, formerly called Kirkuk (Kirkuk); Thikar, also written Dhiqar (Nasiriyah); Wasit, formerly called Kut (Kut). Anbar governorate was previously divided into Dulaym and Ramadi governorates, and Thikar was previously divided into Muntafiq and Nasiriyah governorates. The 18 governorates are administrative districts which are similar to states or provinces in North America.

B. Historical Development

From the mid-sixteenth century to World War I, Iraq was part of the Ottoman Empire. It was eventually organized into three provinces: Mosul (in the north), Baghdad (in the center), and Basrah (in the south). There was little formal education during this period. The first secular (non-religious) schools were established in the mid-nineteenth century. Even though Arabic was the native language of most of the people, Turkish was the language of instruction until 1941.

The Ottoman Empire was dissolved during World War I. In 1921, the Mosul, Baghdad, and Basrah provinces of the former Empire were combined to form the Kingdom of Iraq. Faisal I (of the Hashemite family of the Arabian peninsula) served as king under the British Mandate awarded by a conference of Allied Powers in 1920 and confirmed by the League of Nations in 1921.

In 1932, the British Mandate ended. Iraq was admitted to the League of Nations as an independent country. In 1958, revolutionary forces led by the army replaced the monarchy of King Faisal II with the Republic of Iraq.

Until the first secular schools were established in the mid-nineteenth century, almost no formal education existed. When the Kingdom of Iraq was established in 1921, there were only 84 primary schools, six secondary schools of various kinds, and one religious college. Table 1.1 summarizes the increased number of schools at various points in history.

Table 1.1. Number of Schools in Iraq, 1921 Through 1986

Type of School	1921	1932	1951	1961	1970	1977	1986
Kindergarten	–	–	N/A	N/A	123	306	612
Primary	84	300	1,307	4,030	5,622	8,387	8,212
Secondary							
Academic	1	15	162	409	920	1,384	2,315
Fine Arts	–	–	–	–	1	2	3
Vocational	4	4	10	37	45	92	209
Teacher Training Schools	1	1	10	28	28	32	1
Tertiary							
Colleges	–	3	10	–	–	–	–
Religious Colleges	1	1	2	4	4	4	–
Teacher Training Institutes	–	–	–	–	4	13	43
Technical Institutes	–	–	–	–	4	14	22
Universities	–	–	–	2	5	6	6

C. The Higher Literacy Council

The Higher Literacy Council was established in 1978 to implement a new law requiring all illiterate persons aged 15 to 45 to attend literacy classes. The law applied to 2,212,630 persons or 47.48% of that age group (676,693 men; 1,535,937 women). From December 1, 1978 to April 30, 1985, 1,800,744 persons or 81.3% of the targeted group (570,532 men; 1,230,212 women) completed the program. It was anticipated that the remaining portion would complete the program by March 31, 1987.

The literacy program involved classes of up to 30 persons, meeting on a part-time basis, five days per week for a period of seven months. Both basic and advanced levels were offered. Those whose jobs prevented them from attending classes were given lessons recorded on cassettes.

The literacy program is being replaced by a sixteen-month program of compulsory popular classes designed to improve reading and writing skills up to the sixth-year level (i.e., the end of primary school). By February 1987, 366,700 persons had been enrolled in the popular classes.

D. Structure of the Educational System

The current educational system is illustrated in the Diagram of Education in Iraq. The six years of primary education are compulsory and lead to a primary school certificate (see **A** on the diagram). Secondary education is divided into two three-year programs. The intermediate (lower secondary) program leads to an intermediate baccalaureate (**B**). The preparatory (upper secondary) program leads to a preparatory baccalaureate (**C**). Two types of preparatory programs are offered: literary and scientific. The intermediate and preparatory programs may be offered by the same school, or they may be offered by separate schools.

The preparatory program is the academic type of upper secondary education. Eight semi-academic types of upper secondary education parallel the preparatory program. Four of these lead to the following types of vocational baccalaureates: agricultural (**D**), commercial (**E**), industrial (**F**), and veterinary (**G**). Three of the semi-academic programs prepare primary school teachers: those offered by institutes of fine arts, teacher training institutes, and teacher training schools. The programs offered by these three institutions lead to diplomas in primary education (**H**, **J**, and **K** and **L**, respectively).

The last type of semi-academic upper secondary school program, which leads to a certificate of technician (**I**), is offered in a variety of vocational fields by specialized institutes which are supervised by various ministries other than the Ministry of Education.

At the tertiary level are universities as well as other types of institutions. Universities offer programs leading to the bachelor's degree (see **P**, **Q**, **R**, **S**, **T**, **U**, **V**, and **W** on the educational diagram), higher diplomas (indicated by *), master's degrees (**X**, **Y**, and **Z**), and doctor of philosophy (Ph.D.) degrees (indicated by #). Most bachelor's degree programs require four years of study, although a few exceptions exist. Bachelor's degrees in architectural engineering (**S**), dental surgery (**T**), pharmacy (**U**), and veterinary medicine and surgery (**V**) require five years, and bachelor's degree programs in medicine and surgery (**W**) require six years of study plus one additional year of internship. In some fields of study, the universities offer graduate programs which lead to a higher diploma. Although many higher diploma programs were terminated in the early 1980s, some are still offered (e.g., those in medical fields). Master's degrees require one year of coursework plus one year of thesis research. The doctor of philosophy degree requires one year of post-master's degree coursework and two years of research leading to a thesis.

The nonuniversity tertiary institutions provide programs which are parallel to the first two years of the bachelor's degree programs at universities. Teacher training institutes offer two programs leading to diplomas in primary education: a two-year post-preparatory school program (**N**) and the last two years of a five-year program (**J**) which begins after intermediate school. Two-year and three-year diploma of technician programs in various specializations are offered in technical institutes (**O**) and specialized institutes (**M**) which are supervised by different ministries.

E. Responsibility for Education

Nineteen ministries of the national government and one ministry-level agency are responsible for portions of the educational system, although each governorate also plays a role in education at the lower levels. Each governorate is involved with various areas of formal education (e.g., curricula, examinations, libraries, teaching aids, and vocational education) plus general cultural programs (songs, plays, and patriotic activities), adult education, and the eradication of illiteracy.

Since one ministry may control education at various levels (i.e., primary, secondary and tertiary), descriptions of Iraqi educational institutions in this volume have been organized according to supervising ministry rather than by educational level. The levels of education supervised by each ministry are outlined below.

The Ministry of Education (chapter II) has primary responsibility for all kindergartens, primary schools, intermediate schools, preparatory schools, preparatory-level vocational schools, fine arts institutes, teacher training schools, teacher training institutes, and teacher training programs at the post-preparatory and post-bachelor's degree levels. The kindergartens, primary, intermediate, and preparatory schools are administered by the director of education and the council of officers of the governorate in which they are located. Governorate officials also cooperate with the Ministry of Local Government but operate according to the policies of the Ministry of Education. Teachers and administrators are assigned to individual schools by the Ministry of Education. Decisions affecting facilities construction and financing are made jointly by the Ministry of Education and the Ministry of Local Government.

The Ministry of Higher Education and Scientific Research (chapter III) supervises the technical institutes and universities. Most decisions affecting curricula, admissions requirements, facilities construction, financing, and assignment of faculty members are made by this Ministry.

Seventeen other ministries and one ministry-level agency (chapter IV) each supervise one or more specialized preparatory-level or tertiary-level institutions. They are the Ministries of Agriculture and Agrarian Reform, Awqaf and Religious Affairs, Culture and Information, Defense, Foreign Affairs, Health, Heavy Industries, Interior, Justice, Labor and Social Affairs, Light Industries, Local Government, Oil and Minerals, Planning, Trade, Transportation and Communications, and Youth. The State Organization for Tourism, a ministry-level governmental agency, also supervises an educational program.

A number of international organizations (e.g., the Arab League Educational, Cultural, and Scientific Organization/ALESCO) operate educational institutions or programs which are located in Iraq but which are not part of the Iraqi educational system.

F. Educational Funding and Access

The public educational system is funded by the national and local governments; students pay no tuition for public education. In addition, all students from preprimary through university levels receive subsidies for books, school supplies, and clothing. Through the 1985-86 academic year, students who enrolled in schools away from home also received subsidies for room and board. The government terminated the room and board subsidies in 1986, partly for financial reasons and partly to encourage students to attend schools located as near to their homes as possible.

Beginning with the 1978-79 academic year, six years of primary education are compulsory. Admission to each higher level of education is based upon performance on examinations taken at the end of each preceding level.

Since 1974, women have had equal access to education and employment in government and industry. Men have a two-year compulsory military service requirement which must be completed as soon as they are no longer enrolled in an educational program. Since 1980, the compulsory military service has been extended through the duration of the Iran-Iraq war.

G. Private and Public Schools

Until 1974, 94 private primary schools existed. Most of them were operated by Moslem religious and fraternal organizations. In 1970, they enrolled approximately 2.2% of all primary school students (i.e., 24,332 out of 1,098,660 students). In addition, 111 private academic, secretarial, and vocational secondary schools, most of which were operated by Christian religious denominations or foreign groups, existed. In 1965, they enrolled approximately 24% of the secondary school students (i.e., approximately 5% of the 12- to 18-year-olds). Between 1956 and 1974, several private tertiary-level institutions also existed. Two of them, Al-Hikma University of Baghdad and the University of Al-Mustansiriyah, had university status.

When private education was terminated in 1974, existing private schools either were closed or were taken over by the Ministry of Education or the Ministry of Higher Education and Scientific Research. In October of 1987, however, the government approved the reintroduction of private institutions at the tertiary level.

H. Language of Instruction

In kindergartens and primary schools, Arabic is the language of instruction in 14 governorates. In the four northern governorates of Arbil, Dahuk, Sulaimaniyah, and Ta'mim, the languages of instruction are Arabic and Kurdish. In all intermediate and preparatory schools, preparatory-level vocational schools, and teacher training programs, Arabic is used.

Arabic has always been the language of instruction in tertiary-level nonscience programs. English was the language used in tertiary-level science-related programs until 1977-81. The language of instruction in science-related programs was changed from English to Arabic for all first-year students in

1977, for second-year students in 1978, and so on. In each program English was still a required subject, and continues to be the language of instruction in one or two other courses. For example, the College of Medicine of the University of Baghdad continues to teach anatomy in English. Tertiary-level professors who are not proficient in Arabic teach in English.

Through 1976, graduate theses and dissertations were written in English with a summary in Arabic. Beginning in 1977 in most fields, they are required to be written in Arabic with a summary in English. Some graduate programs in engineering, medicine, and pharmacy still accept theses written in English.

I. Languages Studied

Arabic is a required subject in each year of primary through preparatory or vocational schools, and English is a required subject starting in the fifth grade and continuing through preparatory or vocational school. In a few experimental intermediate schools and in the literary section of some preparatory schools, a second foreign language (usually French, Russian, or Spanish) is required. Both Arabic and English are required subjects on all types of baccalaureate examinations.

English was a required subject in tertiary-level programs until the late 1980s, but now neither Arabic nor English is a required subject in all programs. At the University of Salahaddin two hours per week of Kurdish language is required in all bachelor's degree programs.

J. Academic Year

The regular academic year lasts from October 1 to May 31, although a few of the specialized tertiary institutions, particularly those administered by the Ministry of Health, follow an October to September academic year. Some tertiary institutions divide the academic year into two semesters with a 10-day vacation between them. At all levels of education, classes are held Saturday through Wednesday and on Thursday morning.

K. Examinations

At all educational levels, examinations are usually administered in June. Students who fail a portion of the June examinations may take supplementary examinations in September.

In primary schools, students who fail in 50% or more of the subjects in June must repeat the entire year. Those who pass at least 50% of the subjects in June are permitted to take supplementary examinations in September. If they fail any of the subjects in September, they must repeat the entire year. Students may enroll in the same school year a maximum of three times.

At the intermediate and preparatory levels, students who fail in three or more subjects in June must repeat the entire year. Those who fail in one or two subjects in June may take supplementary examinations in those subjects in September. If they fail any subjects in September, they must repeat the entire year. Students may enroll in the same school year a maximum of three times.

At the tertiary level, a student who fails in three or more subjects in June is dismissed. A student who fails in one or two subjects in June may take supplementary examinations in those subjects in September. A student who fails two subjects on the supplementary examination in September is dismissed. If only one subject is failed in September, the student may take that subject alone the next academic year. If it is then passed, the student is promoted to the next level of study. If it is failed at the end of the second year, the student is dismissed.

At the tertiary level, particularly in science-related fields, student failure is a major concern. For example, in the College of Engineering of the University of Baghdad, 40% to 50% of the first-year students usually fail mathematics on the June examinations; 20% to 25% of the first-year students usually fail the first year in three or more subjects, thereby failing the entire year, and are dismissed.

The Ministry of Higher Education and Scientific Research is concerned with tertiary-level attrition which is caused by poor performance. The Ministry has directed all universities to monitor student performance. Faculty members are required to use continuous evaluation to identify weak students. At the end of the second month of each semester, faculty members must submit a written report identifying the nature of the problem, e.g., weak background, lack of attention, personal problems. Mandatory attendance at extra classes is required of students who have a weak academic background. Letters are written to the students and their parents.

Since 1986, a council, comprised of the department heads of the University of Technology plus the deans of the colleges of engineering of the other universities, has supervised the grading practices of all engineering programs. The council appoints external examiners to review the depth and comprehensiveness of the examinations, and to review the grades given by faculty members to a random sample of the students. The external examiners can regrade examinations, and can issue directives to engineering faculty members. An examinations committee in each department collects examination grades and computes the students' final grades. This grading review process may be adopted in the future by other colleges.

L. Grading

During the first four years of primary school, the grading scale is 0 to 10, with 5 as the minimum passing grade. During years 5 and 6, the grading scale is 0 to 100, with 50 as the minimum passing grade. The passing grade range (5 to 10, or 50 to 100) is not subdivided into categories.

Intermediate schools, preparatory schools, other types of preparatory-level schools, and all baccalaureate examinations (intermediate, preparatory, and vocational) use a grading scale of 0 to 100, with 50 as the minimum passing grade. The passing grade range (50 to 100) is not subdivided into categories. Grades awarded by these institutions for these examinations can be converted to U.S. grades as follows:

Iraq Grades	Suggested U.S. Equivalent
90-100	A
80-89	A
70-79	B
60-69	C
50-59	D
0-49	F

The technical institutes, and the tertiary-level institutions and programs supervised by other ministries, also use a grading scale of 0 to 100, with 50 as the minimum passing grade, but the passing grade range is subdivided into five categories. Grades awarded by these types of institutions can be converted to U.S. grades as follows:

Iraq Grades	Suggested U.S. Equivalent
90-100 excellent	A
80-89 very good	A
70-79 good	B
60-69 medium	C
50-59 pass	D
0-49 failure	F

The universities use the same grading scale as the technical institutes and the tertiary-level institutions and programs supervised by other ministries. However, admission to university programs in science-related fields is much more competitive than admission to all other tertiary institutions and programs. In addition, professors in university science programs grade much more severely than do professors in other tertiary programs. In most science colleges, no student has ever graduated with a grade average above 89%, and generally less than 5% graduate with a grade average above 79%.

Taking these differences into consideration, grades awarded by the universities can be converted to U.S. grades as follows:

Iraq Grades Science Fields	Suggested U.S. Equivalent	Iraq Grades Non-Science Fields	Suggested U.S. Equivalent
90-100 excellent	A	90-100 excellent	A
80-89 very good	A	80-89 very good	A

70-79 good	A	70-79 good	B
60-69 average	B	60-69 average	C
50-59 pass	C	50-59 pass	D
0-49 failure	F	0-49 failure	F

At the graduate (master's and doctoral) levels, a grade of 60 is generally required to pass a course, but a grade average of 70 is generally required to complete a program.

Prior to 1978, the universities generally divided the passing grade range into four categories instead of five. That grading scale can be converted to U.S. grades as follows:

Iraq Grades Science Fields	**Suggested U.S. Equivalent**	**Iraq Grades Non-Science Fields**	**Suggested U.S. Equivalent**
90-100 excellent	A	90-100 excellent	A
80-89 very good	A	80-89 very good	A
70-79 good	A	70-79 good	B
65-69 good	B	65-69 good	C
60-64 pass (fair)	B	60-64 pass (fair)	C
50-59 pass (fair)	C	50-59 pass (fair)	D
0-49 fail (poor)	F	0-49 fail (poor)	F

Prior to 1978, some universities subdivided the 0-100 grading scale in other ways. Sometimes the failing grade range was divided into two categories: 40-49 poor, and 0-39 very poor. Sometimes 50 was the minimum passing grade for individual courses, but a grade average of at least 60 was required to complete a program (e.g., bachelor's degree programs in engineering and medicine). The following grading scale was used by the University of Baghdad through 1964 and by the University of Mosul through 1967:

Iraqi Grades Science Fields	**Suggested U.S. Equivalent**	**Iraq Grades Non-Science Fields**	**Suggested U.S. Equivalent**
89-100 excellent	A	89-100 excellent	A
80-88 very good	A	80-88 very good	B
69-79 good	B	69-79 good	C
60-68 pass	C	60-68 pass	D
0-59 weak	F	0-59 weak	F

Universities calculate a student's grade average for four-year bachelor's degree programs on the basis of the last two years of academic work. For five-year degree programs, the average is calculated on the basis of the last three years of work.

II. Institutions Supervised by the Ministry of Education

The Ministry of Education supervises kindergartens, primary schools, intermediate schools, preparatory schools, vocational schools, and teacher training institutions and programs.

A. Kindergartens

Kindergartens enroll children who are 4 and 5 years of age. Introduced in 1933, kindergartens originally offered a separate program for each age group. For children 4 years of age, the program involved primarily games and songs. Children 5 years of age were introduced to numbers, reading, and some verses of the Qur'an.

Currently, the kindergarten program uses a unit method of teaching that helps children to learn appreciation, scientific thinking, skills, and values in an integrated manner. For example, a unit on birds is used to teach colors, counting, scientific values, and vocabulary. Separate exercises are chosen which are appropriate to each age group. The goal of kindergarten education is to develop artistic, linguistic, mathematical, motor, national patriotic, physical, and social skills.

Kindergarten is not compulsory. It is offered primarily in the cities and major towns. All kindergartens are separate schools (not part of a primary school). All are coeducational. In 1983, some kindergartens were converted from half-day to long-hour programs (i.e., longer than a regular working day) to accomodate children of working mothers.

The number of kindergartens and their enrollment have increased steadily. In 1961-62, there were 110 schools for 11,538 students and 305 teachers. In 1975-76, there were 245 schools for 44,413 students and 1,913 teachers. In 1980-81, there were 387 schools for 76,431 students and 3,235 teachers. In 1986-87, there were 612 schools for 80,264 students and 4,701 teachers.

B. Primary Schools

Beginning with the 1978-79 academic year, primary education is compulsory for children 6 through 11 years of age. The primary school curriculum is illustrated in Tables 2.1 and 2.2.

In the 1977 curriculum, Arabic includes grammar, composition, penmanship, reading, and recitation. Agriculture, art, and home economics are sometimes listed altogether as *practical subjects*. Social and National Education includes geography, history, and Arab national education. They are taught as one subject in the fourth year, but as three separate subjects in the last two years.

Table 2.1. Primary School Curriculum, 1977

	Hours per Week					
Subject Year	1	2	3	4	5	6
Agriculture	2	2	2	2	1	1
Arabic	11	11	11	11	7	7
Modern Mathematics	6	6	6	6	5	5
Art (Drawing & Handicrafts)	2	2	2	2	1	1
English	–	–	–	–	4	4
Home Economics	–	–	–	–	1	1
Music	1	1	1	1	1	1
Physical Education	2	2	2	2	2	2
Religious Education	2	2	2	2	2	2
Science & Health Education	–	–	–	3	3	3
Social & National Education	–	–	–	3	5	5
Socio-Biological Education	4	4	4	–	–	–
Totals	30	30	30	32	32	32

Table 2.2. Primary School Curriculum, 1986

	Hours per Week					
Subject Year	1	2	3	4	5	6
Agriculture	1	1	1	1	1	1
Arabic & Penmanship	11	11	11	11	7	7
Arithmetic	6	6	6	6	5	5
Art (Drawing & Handicrafts)	2	2	2	2	1	1
Biology	4	4	4	–	–	–
English	–	–	–	–	4	4
Geography	–	–	–	–	2	2
History	–	–	–	–	2	2
Home Economics	–	–	–	–	1	1
Music	1	1	1	1	1	1
National Education	–	–	–	3	1	1
Physical Education	3	3	3	2	2	2
Religious Education	2	2	2	3	3	3
Science & Hygiene	–	–	–	3	3	3
Totals	30	30	30	32	33	33

To complete each of the six academic years, students must pass examinations prepared by individual classroom teachers during the course of the year and end-of-year examinations prepared by the educational officials of the governorate. Each of these examinations contributes 50% to the student's final grade for the year.

Until 1978, the sixth year of primary school ended with a Ministry of Education examination which led to a **Primary School Certificate** (also called

Primary Baccalaureate). Beginning with the 1978-79 academic year, the Ministry examination was replaced by in-school examinations set by individual sixth-year teachers. Those who passed the in-school examinations received a Primary School Certificate and could proceed automatically to the first year of intermediate school. In the 1980s, the Ministry examination was reinstated.

The number of primary schools and their enrollment have increased steadily. In 1950-51, there were 1,101 schools for 180,779 students and 6,367 teachers. In 1960-61, there were 3,679 schools for 760,463 students and 25,046 teachers. In 1970-71, there were 5,622 schools for 1,098,660 students and 49,822 teachers. In 1986-87, there were 8,212 schools for 2,920,959 students and 123,310 teachers.

In 1986-87, there were 789 primary schools for boys, 437 for girls, and 6,986 coeducational. In 1986-87, 85.0% of the primary schools were coeducational (up from 63.6% in 1977-78). In 1986-87, 66.2% of the primary school teachers were women, compared to only 40.8% in 1977-78. The Ministry of Education is now trying to increase the number of men assigned to teach in primary schools.

Most primary school teachers are graduates of preparatory-level teacher training schools (three-year programs after intermediate school). Some teachers are graduates of the teacher training programs offered by preparatory-level institutes of fine arts or the home economics vocational schools. Others are graduates of university degree programs (in fine arts, humanities, physical education, science, or social studies) plus a pre-service training program offered by the Ministry of Education. Most of the teachers who entered service in 1987 and thereafter will be graduates of five-year teacher training institutes (after intermediate school) or two-year teacher training institutes (after preparatory school). (See section F below for more information on teacher training programs.)

C. Intermediate Schools

The three-year intermediate school program is open to all who have a Primary School Certificate but is not compulsory. All students follow a common curriculum, illustrated in Table 2.3.

The intermediate school program culminates in a Ministry of Education examination which leads to an **Intermediate Baccalaureate** (sometimes referred to as **Certificate of Intermediate Studies**). Approximately 70% of intermediate school students complete the three-year program and take the examination. Approximately 73% of those who take the examination pass it on the first attempt in June, and approximately 24% pass it on the second attempt in September.

When secondary education was introduced in 1920, it was a four-year program. It was expanded to five years in 1929, and divided into a three-year intermediate stage and a two-year preparatory stage. In 1966, the preparatory stage was expanded to three years. Some schools offer both the intermediate

Table 2.3. Intermediate School Curriculum, 1977, and 1986

		Hours per Week					
		1977			1986		
Subject	**Year**	1	2	3	1	2	3
Arabic Language*		6	6	6	6	6	6
Drawing (Boys/Girls)		3/2	2/1	2/1	2	–	–
English*		6	5	5	6	5	5
General Science		3	–	–	4	–	–
Home Economics (Boys/Girls)		–/2	–/1	–/2	–/1	–/1	–/1
Mathematics*							
Algebra		–	2	2	–	3	3
Arithmetic		–	–	–	5	–	–
Geometry		–	3	3	–	2	2
Principles		5	–	–	–	–	–
Natural Science*							
Biology & Health		–	2	2	–	–	–
Hygiene		–	–	–	–	2	–
Physical Education (Boys/Girls)		3/2	2/2	2/1	1	1	1
Physical Science*							
Chemistry		–	2	2	–	2	2
Physics		–	2	2	–	2	2
Religious Education		1	1	1	2	2	2
Social & National Education*							
Geography		2	2	2	2	2	2
History		2	2	2	2	2	2
National Education (Civics)		1	1	1	1	1	1
Psychology		–	–	–	–	–	2
Totals	Boys	32	32	32	31	30	30
	Girls	32	32	32	32	31	31

*Subjects which are tested on the Intermediate Baccalaureate examination.

school program and the preparatory school program while others offer only one of the two.

The number of schools offering the intermediate and preparatory programs and their enrollment have increased steadily. In 1950-51, there were 95 schools for 22,706 students and 999 teachers. In 1960-61, there were 370 schools for 135,986 students and 3,715 teachers. In 1970-71, there were 920 schools for 304,240 students and 12,319 teachers. In 1980-81 and 1986-87, there were 1,891 and 2,315 schools, respectively.

In 1986-87, 1,362 of the 2,315 schools offered only the intermediate school program, 255 offered only the preparatory school program, and 698 offered both programs. Of the 1,362 schools which offered only the intermediate school program in 1986-87, 631 enrolled boys only, 401 enrolled girls only, and 330 were coeducational. In that year, there were 20,441 intermediate school teachers (8,980 men; 11,461 women) and 533,636 students (349,263 boys; 184,373 girls). Most of the teachers in boys' schools are men, and most of the teachers in girls' schools are women.

Most teachers in intermediate schools are graduates of the academies of fine arts of the Universities of Al-Mustansiriyah and Baghdad; of the colleges of education of the Universities of Al-Mustansiriyah, Baghdad, Basrah, Mosul, and Salahaddin; or of the colleges of physical education of the Universities of Baghdad and Mosul. Some of the teachers are graduates of a college of arts or a college of science of one of the universities, plus a pre-service training program administered by the Ministry of Education.

D. Preparatory Schools

Preparatory schools offer a three-year university-preparatory academic program which is divided into separate literary and scientific sections. From 1929 to 1931, preparatory schools were divided into literary, mathematics, science, and social studies sections. Other types of preparatory-level education are offered in teacher training institutes, fine arts institutes, and four types of vocational schools (see sections E and F later in this chapter). Other preparatory-level specialized schools are administered by other ministries (see chapter IV).

Admission to all preparatory schools is based upon a combination of the student's aptitude and interests, the grades earned on the Intermediate Baccalaureate examination, the parents' wishes, and the need for trained personnel as determined by the Ministry of Planning. The scientific section of preparatory school attracts the best students, followed in order by the literary section, the teacher training institutes, the fine arts institutes, the vocational schools and the preparatory-level specialized schools.

Prior to 1966, the preparatory school program was two years in length. The last class in the two-year program graduated in 1967. Students who started preparatory school in 1966 formed the first class of the three-year program that graduated in 1969. There were no preparatory school graduates in 1968.

The curriculum of the literary section of preparatory school is given in Table 2.4; the scientific section in Table 2.5.

Table 2.4. Three-Year Preparatory School Curriculum, Literary Section, 1977 and 1986

		Hours per Week					
		1977			1986		
Subject	Year	1	2	3	1	2	3
Arabic Language*		5	8	8	5	8	8
Art/Drawing		1	1	1	1	1	1
English Language*		5	6	6	5	6	6
Home Economics (Boys/Girls)		–/2	–/2	–/2	–/1	–/1	–/1
Hygiene (Boys/Girls)		–	–	–	–/1	–/1	–/–
Kurdish Language		–	–	2	2	–	–
Mathematics*		3	2	2	3	2	2
Physical Education		1	1	1	1	2†	1

Religious Education		2	2	2	2	2	2
Sciences							
Biology		3	–	–	3	–	–
Chemistry		3	–	–	3	–	–
Physics		3	–	–	3	–	–
Social Sciences							
Economics*		–	2	2	–	2	2
Geography*		2	3	3	2	3	3
History*		2	3	3	2	3	3
National & Social Studies		–	–	–	1	–	–
Sociology		–	2	–	–	2	–
Totals	Boys	30	30	30	33	31	28
	Girls	32	32	32	35	33	29

*Subjects which are tested on the Preparatory Baccalaureate examination, Literary Section.
†Includes Civil Defense.

Table 2.5. Three-Year Preparatory School Curriculum, Scientific Section, 1977 and 1986

		Hours per Week					
		1977			1986		
Subject	Year	1	2	3	1	2	3
Arabic Language*		5	4	4	5	4	4
Drawing		1	1	1	1	1	1
English Language*		5	5	5	5	5	5
Home Economics (Boys/Girls)		–/2	–/2	–/1	–/2	–/2	–/1
Kurdish Language		–	–	2	2	–	–
Mathematics							
Algebra & Trigonometry		3	6	–	3	6	–
Solid & Analytic Geometry & Calculus*		–	–	5	–	–	5
Natural Sciences							
Biology*		3	4	4	3	4	4
Physical Education		1	1	1	1	2†	1
Physical Sciences							
Chemistry*		3	4	4	3	4	4
Physics*		3	4	4	3	4	4
Religious Education		2	2	2	2	2	2
Social Sciences							
Geography		2	–	–	2	–	–
History		2	–	–	2	–	–
National & Social Studies		–	–	–	1	–	–
Totals	Boys	30	31	32	33	32	30
	Girls	32	33	33	35	34	31

*Subjects which are tested on the Preparatory Baccalaureate examination, Scientific Section.
†Includes Civil Defense.

In 1983-84, 23 schools in the Baghdad area added a second foreign language. These schools have made it compulsory for literary section students. In 1985-86, 8,200 students were enrolled in one of the following second languages: French—4,210 students (33 teachers); Russian—1,842 students (19 teachers); Spanish—2,148 students (17 teachers).

Graduates of the literary section of preparatory school receive a **Preparatory Baccalaureate, Literary Section**. See document 2.1 for a sample grade report for the Preparatory Baccalaureate Examination, Literary Section. They qualify for admission to the academies of fine arts; the colleges of administration and economics, Al-Shari'a, arts, education, law and politics, and physical education; the Institutes of Administration in Karkh and Risafa; and the post-preparatory teacher training institutes. They do not qualify for admission to any tertiary programs which are quantitative or scientific in nature because they have had very little training in mathematics and sciences.

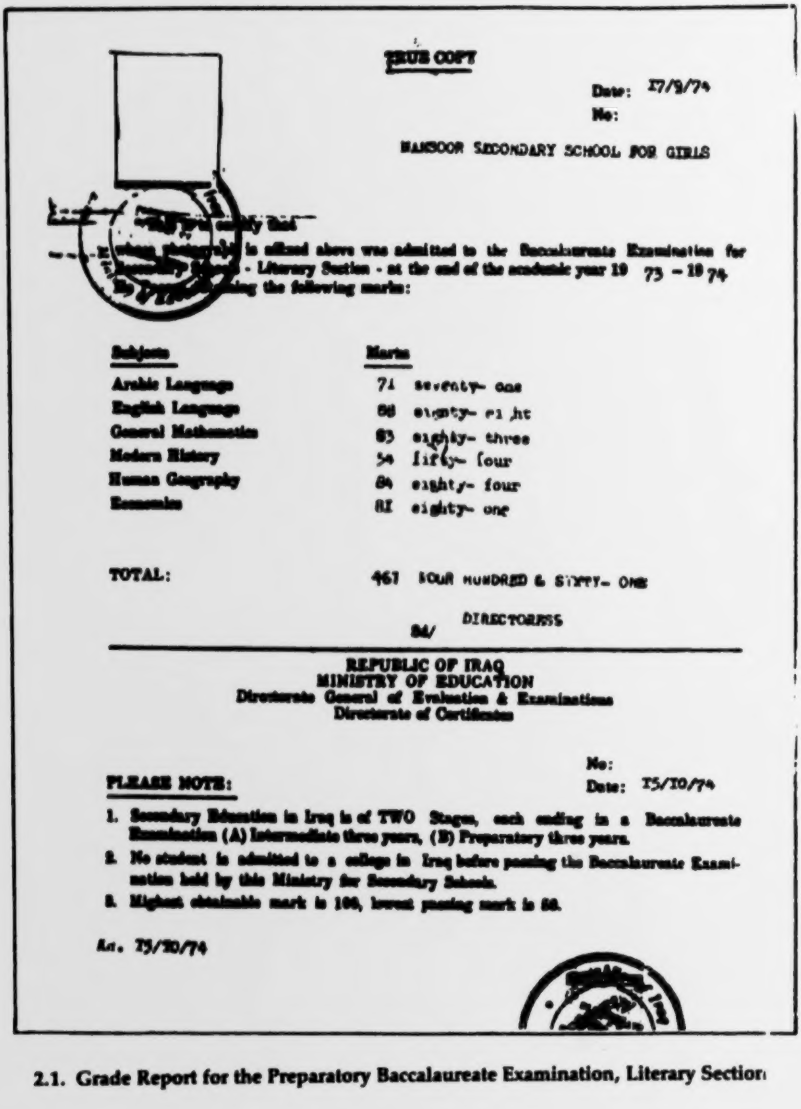
Graduates of the scientific section of preparatory school receive a **Preparatory Baccalaureate, Scientific Section**. See document 2.2 for a sample grade report for the Preparatory Baccalaureate Examination, Scientific Section. They qualify for admission to the academies of fine arts; the colleges of administration and economics, agriculture, agriculture and forestry, dentistry, education, engineering, medicine, nursing, pharmacy, physical education, sciences, and veterinary medicine; the University of Technology; the technical institutes; the post-preparatory teacher training institutes; and the specialized institutes administered by other ministries.

Approximately 68% of preparatory school students (scientific and literary sections) complete the three-year program and take examinations administered by the Ministry of Education. Approximately 57% of those who take the examinations pass them on the first attempt in June, and approximately 4% pass them on the second attempt in September. (In other words, approximately 41% of those who enroll in the first year of a preparatory school receive a Preparatory Baccalaureate three years later.) In 1961, 47% passed the Preparatory Baccalaureate examinations. In 1966, approximately 30% passed the examinations in June, and approximately 20% passed them in September.

Of the 255 schools which offered only the preparatory school program in 1986-87, 153 enrolled boys only, 86 enrolled girls only, and 16 were coeducational. In that year, there were 5,663 teachers (3,432 men; 2,231 women) and 134,797 students (88,624 boys; 46,173 girls).

Prior to 1974, there were four private preparatory schools with excellent academic reputations: the **American School for Boys** in Basrah, established in 1912 by the Dutch Reform Mission; **Baghdad College**, a school for boys established in 1932 by American Jesuits; **Baghdad High School**, established in 1925 as the **American School for Girls** by the United Mission Board in Iraq, an American Protestant missionary organization; and **Shamash Secondary School**.

Most of the teachers in boys' schools are men, and most of the teachers in girls' schools are women. Most preparatory school teachers are graduates of



TRUE COPY

Date: 17/9/74
No:

MANSOOR SECONDARY SCHOOL FOR GIRLS

[illegible] certify that

[illegible] whose photograph is affixed above was admitted to the Baccalaureate Examination for Secondary Schools - Literary Section - at the end of the academic year 19 73 - 19 74 [illegible] the following marks:

Subjects	Marks
Arabic Language	71 seventy- one
English Language	88 eighty- eight
General Mathematics	83 eighty- three
Modern History	54 fifty- four
Human Geography	84 eighty- four
Economics	81 eighty- one
TOTAL:	461 FOUR HUNDRED & SIXTY- ONE

Sd/ DIRECTORESS

REPUBLIC OF IRAQ
MINISTRY OF EDUCATION
Directorate General of Evaluation & Examinations
Directorate of Certificates

No:
Date: 15/10/74

PLEASE NOTE:

1. Secondary Education in Iraq is of TWO Stages, each ending in a Baccalaureate Examination (A) Intermediate three years, (B) Preparatory three years.
2. No student is admitted to a college in Iraq before passing the Baccalaureate Examination held by this Ministry for Secondary Schools.
3. Highest obtainable mark is 100, lowest passing mark is 50.

Ar. 15/10/74

2.1. Grade Report for the Preparatory Baccalaureate Examination, Literary Section

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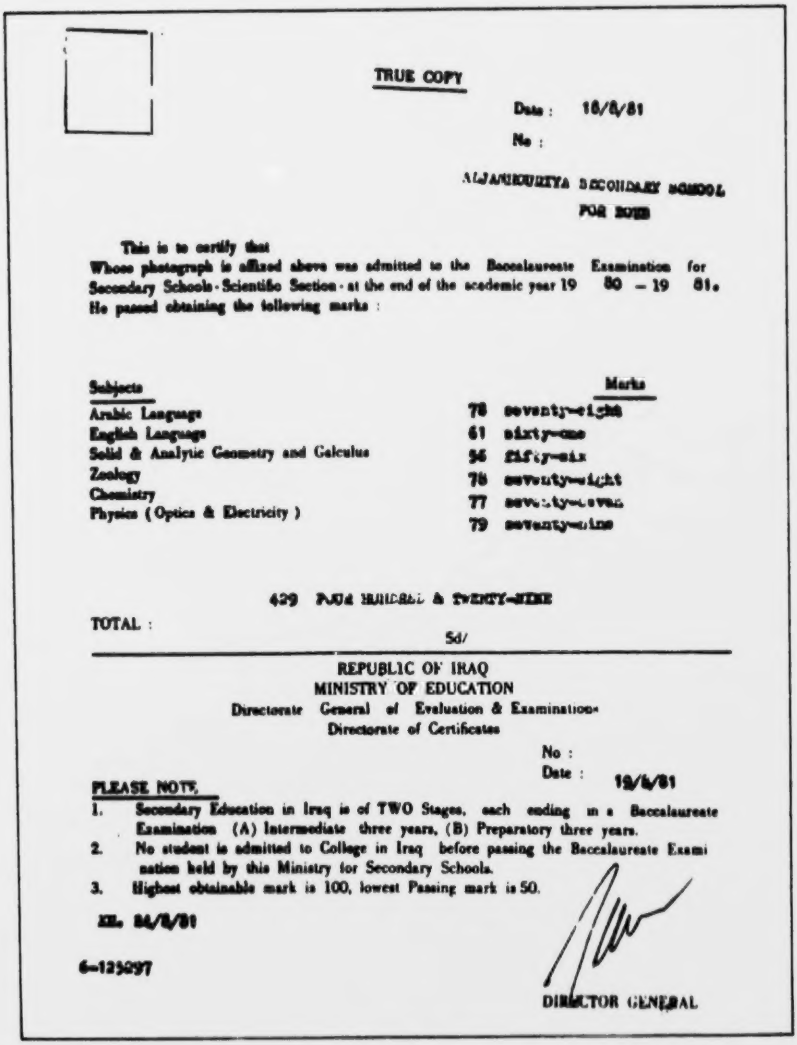


TRUE COPY

Date : 18/8/81
No :

ALJAMHOURIYA SECONDARY SCHOOL
FOR BOYS

This is to certify that
Whose photograph is affixed above was admitted to the Baccalaureate Examination for Secondary Schools - Scientific Section - at the end of the academic year 19 80 – 19 81.
He passed obtaining the following marks :

Subjects	Marks
Arabic Language	78 seventy-eight
English Language	61 sixty-one
Solid & Analytic Geometry and Calculus	56 fifty-six
Zoology	78 seventy-eight
Chemistry	77 seventy-seven
Physics (Optics & Electricity)	79 seventy-nine

TOTAL : 429 FOUR HUNDRED & TWENTY-NINE

Sd/

REPUBLIC OF IRAQ
MINISTRY OF EDUCATION
Directorate General of Evaluation & Examinations
Directorate of Certificates

No :
Date : 19/8/81

PLEASE NOTE

1. Secondary Education in Iraq is of TWO Stages, each ending in a Baccalaureate Examination (A) Intermediate three years, (B) Preparatory three years.
2. No student is admitted to College in Iraq before passing the Baccalaureate Examination held by this Ministry for Secondary Schools.
3. Highest obtainable mark is 100, lowest Passing mark is 50.

[illegible] 24/8/81

6–123297

DIRECTOR GENERAL

2.2. Grade Report for the Preparatory Baccalaureate Examination, Scientific Section the academies of fine arts of the Universities of Al-Mustansiriyah and Baghdad; the colleges of education of the Universities of Al-Mustansiriyah, Baghdad, Basrah, Mosul, and Salahaddin; or the colleges of physical education of the Universities of Baghdad and Mosul. Some of the teachers are graduates of a college of arts or a college of sciences of one of the universities, plus a pre-service training program administered by the Ministry of Education.

For information concerning the number of preparatory schools, teachers, and students, see section C above. There are eight other types of preparatory-level schools: four types of vocational schools (see section E below), fine arts institutes, teacher training schools, and teacher training institutes (see section F below); and specialized schools operated by other ministries (see chapter IV).

E. Vocational Schools

Vocational schools offer three years of preparatory-level education. The coursework consists of 40%-45% theoretical and 55%-60% practical (i.e., laboratory and workshop). Admission is based upon the Intermediate Baccalaureate. Each vocational school emphasizes production. Items produced by the students are sold, and the proceeds are used to supplement the school's budget.

The number of vocational schools and their enrollment have increased steadily. In 1961-62, there were 37 schools for 7,369 students and 638 teachers. In 1970-71, there were 45 schools for 9,616 students and 965 teachers. In 1975-76, there were 80 schools for 23,782 students and 1,645 teachers. In 1985-86, there were 219 schools for 132,500 students and 6,344 teachers.

Four types of vocational schools exist: agricultural, commercial, industrial, and veterinary. A fifth type, home economics, was terminated in 1974. In earlier years, the agricultural, home economics, and industrial types of vocational schools offered six-year programs following primary school (i.e., both intermediate and preparatory-level programs). All of the six-year programs have been discontinued.

All vocational school programs now include Arabic, English, and national and socialist education (formerly known as Arab society). In the 1980s, compulsory summer training was added after the first and second years. The grade for this component is based upon work performance (60%), a written report (10%), and a written examination (30%). The other courses required in each type of vocational school are outlined in the following sections which further describe each type of vocational school.

At the conclusion of the third year in a vocational school, students take examinations administered by the Ministry of Education. Those who pass these examinations receive a **Vocational Baccalaureate (Agricultural, Commercial, Industrial, or Veterinary Section)**.

Agricultural Vocational Schools

Agricultural vocational schools were established in 1927, terminated in 1931, and re-established in 1937. The number of schools and their enrollment have increased steadily. In 1956-57, there were 4 schools and 160 students. In 1961-62, there were 10 schools for 1,685 students. In 1970-71, there were 13 schools for 3,616 students and 378 teachers. In 1977-78, there were 21 schools for 5,784 students and 646 teachers. In 1985-86, there were 22 schools for an estimated 10,000 students and approximately 1,000 teachers.

From 1956-57 to the mid-1960s, agricultural vocational schools offered a three-year program after primary school. The program was expanded to six years after primary school in the mid-1960s and later changed to three years after intermediate school. In 1977, all of the students were boys. In 1985, only 60% were boys.

The agricultural curriculum is given in Table 2.6. Students may specialize in animal production or plant production. During each summer after the first and second years of the three-year program, students must complete six weeks of practical training at their school or on a government farm.

Graduates of agricultural preparatory schools receive a **Vocational Baccalaureate, Agricultural Section**. The top 10% of the graduates in each specialty at each agricultural vocational school, plus the next three graduates in rank order, can enroll at the colleges of agriculture of the Universities of Baghdad and Basrah, at the College of Agriculture and Forestry of the University of Mosul, or in the agricultural programs of the technical institutes. The rest of the graduates are placed in employment by the Ministry of Agriculture and Agrarian Reform.

Teachers of academic subjects in agricultural vocational schools have the same backgrounds as teachers in preparatory schools. Teachers of vocational subjects are graduates of the Department of Agricultural Education of the College of Agriculture of the Universities of Baghdad or Basrah or of the College of Agriculture and Forestry of the University of Mosul. Trainers for the workshops and practical training components of the curriculum are graduates of the agriculture department of one of the technical institutes.

Commercial Vocational Schools

Until the 1970s, the commercial school curriculum was offered as a section of the academic preparatory schools. Since then, it has been offered by separate commercial vocational schools. The number of schools and their enrollment has fluctuated as the government has varied the importance it has attached to this type of vocational education: in 1957-58, there were 42 schools for 6,465 students. In 1961-62, there were 2 schools and 464 students. In 1970-71, there were 6 schools for 1,583 students and 94 teachers. In 1977-78, there were 33 schools for 9,944 students and 527 teachers. In 1985-86, there were 88 schools for an estimated 42,000 students and approximately 1,800 teachers.

Table 2.6. Agricultural Vocational School Curriculum, 1977 and 1986

Hours/Week:	Lec/Lab		Lec/Lab		Lec/Lab		Lec/Lab		Lec/Lab		Lec/Lab	
			1977						1986			
Subject Year	1		2		3		1		2		3	
Agricultural Economics & Agricultural Extension*												
Agricultural Extension & Social Development	–	–	–	–	1	–	–	–	–	–	–	–
Agricultural Economics & Cooperatives	–	–	2	–	–	–	–	–	3	–	–	–
Agricultural Implements & Machinery	–	4	–	4	–	4	–	2	–	2	–	2
Animal Husbandry & Veterinary Science*												
Animal Husbandry	2	2	–	–	–	–	–	–	–	–	–	–
Dairy & Poultry Farming	–	–	–	–	1	2	–	–	–	–	–	–
Poultry Farming	–	–	1	2	–	–	–	–	–	–	–	–
Veterinary Science	–	–	1	1	–	–	–	–	–	–	–	–
Arabic Language*	–	–	–	–	–	–	3	–	3	–	3	–
Arabic Language & Religion*	2	–	2	–	2	–	–	–	–	–	–	–
Chemistry	2	2	–	–	–	–	–	–	–	–	–	–
Crop Protection*	–	–	–	–	–	–	–	–	1	1	–	–
Economics	–	–	–	–	–	–	3	–	–	–	–	–
English Language*	2	–	2	–	–	–	2	–	2	–	2	–
Farm Labor & Training	–	5	–	8	–	13	–	–	–	–	–	–
Farm Management & Agricultural Extension*	–	–	–	–	–	–	–	–	–	–	3	–
Farm Management & Bookkeeping	–	–	–	–	2	–	–	–	–	–	–	–
Farm Produce	2	3	2	3	2	3	–	–	–	–	–	–
Field Crops & Plant Protection*	–	–	3	1	–	–	–	–	–	–	–	–
Field Crops & Soil*	–	–	–	–	–	–	2	4	–	–	–	–
Floriculture	–	–	–	–	–	–	–	–	–	–	2	4
Food Industries*	–	–	–	–	1	2	–	–	–	–	–	–

continued

Hours/Week:	Lec/Lab		Lec/Lab 1977		Lec/Lab		Lec/Lab		Lec/Lab 1986		Lec/Lab	
Subject Year	1		2		3		1		2		3	
Horticulture*	2	3	2	3	2	3	2	3	2	3	2	3
Kurdish Language	†	–	†	–	2	–	2	–	–	–	–	–
Mathematics	2	–	–	–	–	–	2	–	2	–	2	–
National & Social Studies	–	–	–	–	–	–	1	–	–	–	–	–
Natural & Biological Sciences*	–	–	–	–	–	–	3	3	3	3	3	3
Botany & Zoology	2	2	–	–	–	–	–	–	–	–	–	–
Physical Education	–	–	–	–	–	–	–	1	–	1	–	1
Physics	2	1	–	–	–	–	–	–	–	–	–	–
Projects	–	–	–	–	–	–	–	3	–	3	–	3
Religion	–	–	–	–	–	–	2	–	2	–	2	–
Silk Worm & Bee Keeping*	–	–	1	–	–	–	–	–	–	–	–	–
Soil & Agricultural Reform	–	–	2	–	–	–	–	–	–	–	–	–
Vegetables	–	–	–	–	–	–	–	–	1	3	–	–
Totals	18	22	18	22	13	27	22	16	19	16	19	16

Lec = Lecture, Lab = Laboratory.

*Subjects which are tested on the Vocational Baccalaureate examination, Agricultural Section.

†In the Kurdish areas, students take 2 hours of Kurdish Language.

The commercial vocational school curricula is provided in Tables 2.7 and 2.8. Students may specialize in accounting (bookkeeping), management and secretarial studies, marketing, or stores (warehousing). During each summer after the first and second years of the three-year program, students must complete six weeks of practical training in government offices or in offices of the national bank.

Table 2.7. Commercial Vocational School Curriculum, 1977

	Hours/Week				Hours/Week		
Subject Year	1	2	3	**Subject** *(continued)*	1	2	3
Arab Society	2	2	–	Physical Education	1	1	1
Arabic Language & Religion*	5	5	5	Specialization Subjects*	18†	19	21
English Language*	4	4	4	Totals	30†	31	31‡

*Subjects which are tested on the Vocational Baccalaureate examination, Commercial Section.
†One more for the management and secretarial track.
‡Two less for the management and secretarial track.

Graduates of commercial vocational schools receive a **Vocational Baccalaureate, Commercial Section**. The top 10% of the graduates in each specialty at each commercial vocational school, plus the next three graduates in rank order, can enroll at the colleges of administration and economics of the Universities of Al-Mustansiriyah, Baghdad, Basrah, Mosul, and Salahaddin, the Institutes of Administration in Karkh and Risafa, or in the commercial programs of the other technical institutes. The rest of the graduates are placed in employment by various ministries of the national government.

Teachers of academic subjects in commercial vocational schools have the same backgrounds as teachers in preparatory schools. Teachers of vocational subjects are graduates of the departments of commercial education of the colleges of administration and economics of the universities of Al-Mustansiriyah, Baghdad, Basrah, Mosul, and Salahaddin. Teachers of typing are graduates of the Institute of Administration, Risafa.

Home Economics Vocational Schools

Preparatory-level home economics vocational schools (also called domestic arts schools) were established in 1932. Students could specialize in cooking, secretarial studies, or sewing and dressmaking in the final year. Graduates received a **Vocational Baccalaureate, Home Economics Section**. Most of them became home economics teachers in primary schools.

In 1957-58, intermediate-level home economics schools offering a three-year program were opened. In the mid-1960s, they were merged with the preparatory-level schools which then offered a six-year program.

Table 2.8. Commercial Vocational School Curriculum, Specialization Subjects—Accounting Track, Management and Secretarial Track, Marketing Track, and Stores Track, 1977

		Hours per Week											
Subject	**Year**	**1**	**2**	**3**	**1**	**2**	**3**	**1**	**2**	**3**	**1**	**2**	**3**
		Accounting			Management & Secretarial			Marketing			Stores		
Accounting		6	5	9	4	–	–	3	–	–	3	5	–
Administrative & Commercial Law		–	–	3	–	2	–	–	–	3	–	–	–
Auditing		–	–	2	–	–	–	–	–	–	–	–	–
Commercial Correspondence		–	–	–	–	3	2	–	3	2	–	–	–
Economics		–	3	–	–	–	3	–	–	3	–	–	3
Filing & Indexing		–	–	–	–	–	2	–	–	–	–	–	–
Financial Coding		–	2	–	–	–	–	–	–	–	–	–	–
Financial Mathematics		–	3	–	–	–	–	–	–	–	–	–	–
General Mathematics		4	–	–	3	–	–	3	–	–	3	–	–
Insurance		2	–	–	2	–	–	2	–	–	–	3	–
Kurdish Language		–	–	2	–	–	–	–	–	2	–	–	2
Management		–	–	2	–	2	4	–	2	6	6	5	9
Marketing		–	–	–	–	–	–	4	4	–	–	–	–
Principles of Administration		3	–	–	4	–	–	3	–	–	3	–	–
Public Relations		–	–	–	–	3	–	–	2	–	–	–	–
Secretarial Studies		–	–	–	2	–	–	–	–	–	–	–	–
Statistics		–	3	–	–	3	4	–	2	2	–	3	–
Storage Planning & Control		–	–	–	–	–	–	–	–	–	–	–	4
Transportation Services		–	–	–	–	2	–	–	3	–	–	–	–
Typing (Arabic & English)		3	3	3	4	4	4	3	3	3	3	3	3
Totals		18	19	21	19	19	19	18	19	21	18	19	21

In 1970, there were 16 home economics vocational schools with 209 teachers (all women) and 1,757 students (all girls). This type of school was phased out between 1974 and 1976 (last graduates in June 1976) but might be reintroduced in 1990.

Industrial Vocational Schools

Introduced in 1921, industrial vocational schools have also been called technical education schools and technical vocational schools. In 1956-57, intermediate-level trade schools were opened. They offered a three-year program. In the mid-1960s these trade schools were merged with the preparatory-level industrial schools which then offered a six-year program.

The general curriculum is illustrated in Table 2.9. Students who specialize in engineering drawing follow a different curriculum. During each summer after the first and second years of the three-year program, students must complete six weeks of practical training in factories. Students may specialize in one of 18 fields: automotive mechanics, building trades, carpentry (furniture and model making), casting, ceramics, die making, electricity, electronics, engineering drawing, food industry, heating and cooling, mechanics, mining,

Table 2.9. Industrial Vocational School Curriculum, 1977 and 1986

		Hours per Week					
		1977			1986		
Subject	**Year**	1	2	3	1	2	3
Arabic Language*		2	2	–	3	3	3
Chemistry		–	–	2	–	–	–
Commercial Information & Labor Laws		–	–	2	–	–	–
English Language*		2	3	3	2	2	2
Geometric & Industrial Drawing*		6	4	4	–	–	–
Industrial & Engineering Drawing*		–	–	–	3	3	3
Industrial Arithmetic		2	2	2	–	–	–
Industrial Sciences*		4	4	4	4	4	4
Kurdish Language		–	–	–	2	–	–
Mathematics*		2	3	3	3	3	3
National & Social Studies		–	–	–	1	–	–
Natural Science		–	–	–	4	4	4
Physical Education		2	2	2	–	1	1
Physics*		3	4	4	–	–	–
Practical Training*		18	18	18	16	16	16
Religious Education		1	1	–	2	2	2
Social Sciences		2	–	–	–	–	–
Vocational Health		–	1	–	–	–	–
Vocational Studies		–	–	–	1	1	–
Totals		44	44	44	41	39	38

*Subjects which are tested on the Vocational Baccalaureate examination, Industrial Section.

plumbing, printing, radio electronics, television electronics, and textiles (weaving). New fields, such as computer science and telecommunications, are planned for the future. Some schools offer only one field, others offer a variety of fields.

Graduates of industrial vocational schools receive a **Vocational Baccalaureate, Industrial Section**. See document 2.3 for a sample grade report for the Vocational Baccalaureate Examination, Industrial Section. The top 10% of the graduates in each specialty at each industrial vocational school, plus the next three graduates in rank order, can enroll at the colleges of engineering of the universities of Al-Mustansiriyah, Baghdad, Basrah, Mosul, or Salahaddin; the University of Technology; or the technical institutes. The rest of the graduates are placed in employment by various ministries of the national government.

Teachers of academic subjects in industrial vocational schools have the same backgrounds as teachers in preparatory schools. Teachers of vocational subjects are graduates of the Department of Technical Education of the University of Technology. Trainers for the workshops and the practical training components of the curricula are graduates of the Institute for the Preparation of Industrial Trainers.

The number of schools and their enrollment have increased dramatically since 1970. In 1921-22 and 1951-52, there were 2 schools and fewer than 300 students. In 1961-62, there were 10 schools and 1,907 students. In 1970-71, there were 10 schools for 2,660 students and 284 teachers. In 1977-78, there were 38 schools for 19,460 students and 1,160 teachers. In 1985-86, there were 104 schools for an estimated 80,000 students and 5,000 teachers.

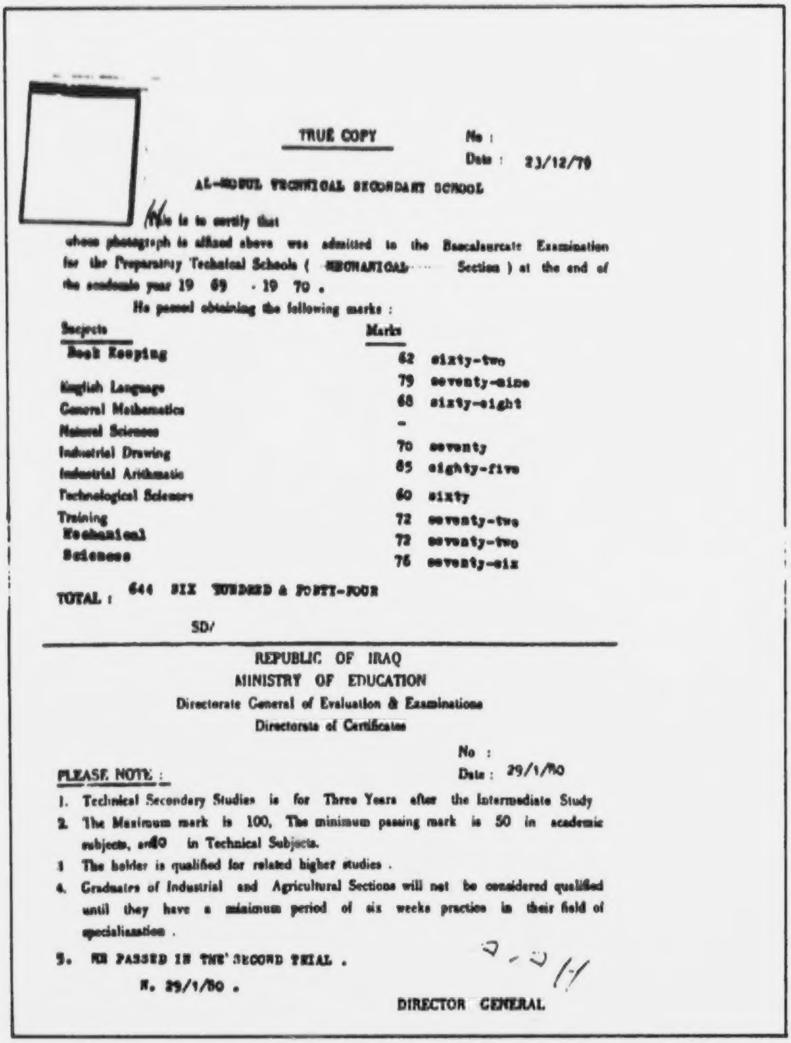
Veterinary Vocational Schools

Veterinary vocational schools were introduced in 1982. In 1986, there were five schools with approximately 140 teachers and approximately 5,000 students (60% boys).

The curriculum of the veterinary vocational school is given in Table 2.10. During each summer after the first and second years of the three-year program, students must complete six weeks of practical training in school or on government farms.

Graduates of veterinary vocational schools receive a **Vocational Baccalaureate, Veterinary Section**. The top 10% of the graduates in each specialty at each veterinary vocational school, plus the next three graduates in rank order, can enroll at the colleges of veterinary medicine of the Universities of Baghdad, Basrah, and Mosul. The rest of the graduates are placed in employment by the Ministry of Agriculture and Agrarian Reform.

Teachers of academic subjects in veterinary vocational schools have the same backgrounds as teachers in preparatory schools. Teachers of vocational subjects are graduates of the colleges of veterinary medicine of the Universities of Baghdad, Basrah, or Mosul. Trainers for the workshops and practical training components of the curricula are graduates of a technical institute of agriculture.



TRUE COPY

No :
Date : 23/12/70

AL-MOSUL TECHNICAL SECONDARY SCHOOL

This is to certify that
whose photograph is affixed above was admitted to the Baccalaureate Examination for the Preparatory Technical Schools (MECHANICAL Section) at the end of the academic year 19 69 - 19 70 .

He passed obtaining the following marks :

Subjects	Marks	
Book Keeping	62	sixty-two
English Language	79	seventy-nine
General Mathematics	68	sixty-eight
Natural Sciences	-	
Industrial Drawing	70	seventy
Industrial Arithmetic	85	eighty-five
Technological Sciences	60	sixty
Training	72	seventy-two
Mechanical	72	seventy-two
Sciences	76	seventy-six

TOTAL : 644 SIX HUNDRED & FORTY-FOUR

SD/

REPUBLIC OF IRAQ
MINISTRY OF EDUCATION
Directorate General of Evaluation & Examinations
Directorate of Certificates

No :
Date : 29/1/80

PLEASE NOTE :

1. Technical Secondary Studies is for Three Years after the Intermediate Study
2. The Maximum mark is 100, The minimum passing mark is 50 in academic subjects, and 40 in Technical Subjects.
3. The holder is qualified for related higher studies .
4. Graduates of Industrial and Agricultural Sections will not be considered qualified until they have a minimum period of six weeks practice in their field of specialisation .
5. HE PASSED IN THE SECOND TRIAL .

M. 29/1/80 .

DIRECTOR GENERAL

2.3. Grade Report for the Vocational Baccalaureate Examination, Industrial Section

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Table 2.10. Veterinary Vocational School Curriculum, 1986

Subject	Hours/Week:	Lec	Lab	Lec	Lab	Lec	Lab
	Year	1		2		3	
Anatomy		2	3	2	2	–	–
Animal Husbandry*		3	3	–	–	–	–
Animal Industries*		–	–	1	2	–	–
Animal Nutrition		–	–	2	1	–	–
Arabic Language*		3	–	3	–	3	–
Artificial Insemination		–	–	–	–	1	–
Biology		2	2	–	–	–	–
Chemistry*		2	2	–	–	–	–
English Language*		2	–	2	–	2	–
Forensic Medicine & Veterinary Law		–	–	–	–	1	–
Infectious & Communicable Diseases*		–	–	–	–	3	–
Kurdish Language		2	–	–	–	–	–
Medicine		–	–	–	–	3	–
Microbiology		–	–	3	2	–	–
National & Social Studies		1	–	–	–	–	–
Physical Education		–	1	–	1	–	1
Physics		–	–	2	2	–	–
Physiology		2	3	–	–	–	–
Poultry Diseases*		–	–	2	2	–	–
Practical Training		–	–	–	–	–	14
Religion		2	–	2	–	2	–
Slaughter Houses & Meat Inspection*		–	–	–	–	1	–
Statistics		–	–	1	–	–	–
Surgery & Obstetrics		–	–	–	–	3	–
Veterinary Pharmacology*		–	–	3	1	–	–
Totals		21	14	23	13	19	15

Lec = Lecture, Lab = Laboratory.

*Subjects which are examined on the Vocational Baccalaureate Examination, Veterinary Section.

F. Teacher Training Programs

The Ministry of Education supervises teacher training programs at the intermediate, preparatory, bachelor's degree, and post-bachelor's degree levels. Descriptions of teacher training programs in this section are grouped according to their entry qualification.

Since 1982, primary school teachers have been trained in five-year programs which follow the Intermediate Baccalaureate program. The program parallels the three years of preparatory school plus the first two years of university work. In addition to this program, a one-year post-intermediate program has been offered since 1959 on an intermittent basis to meet short-term needs for primary teachers; and a two-year post-preparatory program has been offered since the early 1960s to train teachers of English, fine arts, human sciences or physical education.

Previously, primary teacher training was provided in intermediate and preparatory-level programs. One program, terminated in the 1960s, was a three-year intermediate-level program that gradually expanded to four, then five years. Another program, introduced in 1923 and terminated in 1988, was a two-year preparatory-level program that expanded in the 1960s to a three-year program.

Previously, intermediate and preparatory school teachers were trained in three-year post-preparatory school programs offered by nonuniversity tertiary-level institutions, but these programs were phased out during the 1960s.

Most intermediate and preparatory school teachers now are trained in bachelor of arts and bachelor of science degree programs at the universities: in the academies of fine arts of the Universities of Al-Mustansiriyah and Baghdad, the colleges of education of the Universities of Al-Mustansiriyah, Baghdad, Basrah, Mosul, and Salahaddin; and the colleges of physical education of the Universities of Baghdad and Mosul (see chapter III). Some specialized intermediate and preparatory school teachers still are trained in preparatory-level fine arts institutes (described in this section) and post-preparatory technical institutes (see chapter III).

Various short-term programs also are offered by the Ministry of Education for teachers who already have a bachelor's degree as well as for teachers who are changing assignments.

Programs Following Primary School

Prior to 1970, primary school teacher training programs which admitted graduates of a six-year primary school were offered by **elementary teachers colleges for women and rural teachers colleges for men.**

Established in 1934, the elementary teachers colleges for women offered a three-year program to prepare general primary school teachers. The program was expanded twice in the 1940s, first to four years and then to five years. It was discontinued in the 1960s.

Established in 1923, the rural teachers colleges for men (also known as **rural primary teacher training schools**) offered a two-year post-primary school program to prepare rural primary school teachers. In 1934, the program was expanded to five years. These schools were discontinued in the 1960s.

Programs Following Intermediate School

Three types of primary teacher training schools have admitted graduates of intermediate school (i.e., after nine years of education): **teacher training schools, teacher training institutes,** and **institutes of fine arts.**

Beginning in 1923, **teacher training schools** (also known as **primary teacher training schools** and as **primary teachers colleges**) offered a two-year program. The curriculum of the 1965-67 two-year program included the following subjects, with hours noted in parentheses according to year required (Year 1/ Year 2): agriculture (1/-); art (1/1); first aid (-/1); home economics (2/1); methods of teaching (general) (-/2); methods of teaching Arabic (6/6); methods of teaching English (4/4); methods of teaching geography, history, and national studies (3/-); methods of teaching religion (1/-); methods of teaching sciences (2/-); modern education (1/2); music (2/2); philosophy (-/1); physical education (1/ 1); practice teaching (2/2); preparation of audio-visual materials (1/1); psychology (2/2); school management (1/1); teaching observation (2/2); teaching of children (2/-) for a total of 34 hours in Year 1 and 29 hours in Year 2. In the 1960s, the program was expanded to three years. See Table 2.11 for the three-year curriculum.

Table 2.11. Three-Year Post-Intermediate School Program, Teacher Training School, 1975 and 1977

		Hours per Week					
		1975			1977		
Subject	**Year**	1	2	3	1	2	3
Agriculture (Boys/Girls)		2/–	2/–	2/–	–	–	2/2
Arab Society		–	–	2	2	2	1
Arabic Language		–	–	–	5	5	–
Arabic Language & Methods of Teaching Reading & Writing		5	5	6	–	–	–
Art		2	2	–	2	2	–
Child Psychology		–	–	2	–	–	–
Educational Psychology		–	2	–	–	–	–
English Language		5	5	–	5	5	–
Evaluation		–	–	–	–	–	2
Family Affairs (Girls)		–	–	–	2	2	1
General Methods of Teaching		–	3	–	–	–	–
Home Economics & Child Care (Girls)		2	2	–	–	–	–
Kurdish Language		2	2	*	–	–	–
Mathematics		3	2	–	3	3	–
Methods of Teaching Arabic Reading & Writing		–	–	–	–	–	5
Methods of Teaching Art		–	–	2	–	–	1
Methods of Teaching English		–	–	2	–	–	3
Methods of Teaching Geography, History, & Arab Society		–	–	2	–	–	–
Methods of Teaching Mathematics		–	–	2	–	–	2
Methods of Teaching Physical Education		–	–	1	–	–	1
Methods of Teaching Religion		–	–	–	–	–	1
Methods of Teaching Sciences		–	–	2	–	–	2

Methods of Teaching Social Sciences	–	–	–	–	–	2
Music & National Anthems	1	1	1	1	1	1
Observation & Practice Teaching	–	–	2	–	–	–
Physical Education	2	2	–	1	1	–
Principles of Education	3	–	–	2	2	2
Psychology	–	–	–	2	2	2
Religious Education	1	1	1	1	1	–
School Health	–	–	2	–	–	2
School Administration	–	–	2	–	–	–
Sciences						
Botany & Zoology	4	–	–	2	2	–
Chemistry	–	3	–	–	–	–
Physics	–	–	3	–	–	2
Social Sciences	–	–	–	4	4	–
Social Studies: Geography & History	4	4	–	–	–	–
Boys	34	34	32	30	30	31
Girls	34	34	32	32	32	32

*Two hours per week in the Kurdish areas.

Preparatory school graduates completed the three-year program in two years. Graduates of both programs received a **Diploma in Primary Education** (also known as a **Certificate in Primary Education**).

In 1975, there were 27 teacher training schools (11 for boys, 15 for girls, 1 coeducational) with 405 teachers (142 men, 263 women) and 8,096 students (2,611 boys; 5,485 girls). In 1977, there were 32 teacher training schools (14 for boys, 18 for girls). The schools were phased out in the 1980s. The last class graduated from a school in Baghdad in June 1988.

In the 1950s until 1961-62 and intermittently thereafter, the teacher training schools offered a one-year program to meet short-term needs for general primary school teachers or special education teachers. Candidates were usually graduates of an intermediate school. The one-year post-intermediate school program offered at the Al-Adhamiayah Teacher Training School, Baghdad, in 1957-58 included the following subjects: Arabic language, class management, English language, general teaching methods, health science and first aid, mathematics, methods of teaching Arabic, natural science, practice teaching, principles of education, psychological science, religion and *Tafsiyr* (exegesis of the Qur'an), social studies, and visual aids.

Established in 1982 and still in existence today, post-intermediate **teacher training institutes** (also known as **primary teacher training institutes**) offer a five-year program for general primary school teachers. The first class graduated in 1987. Graduates receive a **Diploma in Primary Education**.

The curriculum for the first three years of the five-year program is the same for all students. In the last two years, each student specializes in one of five fields: Arabic and social studies, art, English, physical education, or science and mathematics. The curriculum for the English specialization is illustrated in Table 2.12.

Table 2.12. Five-Year Curriculum, English Specialization, Teacher Training Institute, 1986

Subject	Year 1	2	3	4	5
Adult Education	–	–	1	–	1
Agriculture	–	1	–	–	–
Arabic Calligraphy	1	1	–	–	–
Arabic Language	5	5	–	–	–
Art	2	2	–	–	–
Audio-Visual Aids	–	1	–	–	–
Biology	2	–	–	–	–
Chemistry	–	–	2	–	–
Civil Defense (Boys/Girls)	1/–	–	–	–	–
Curriculum & Measurement	–	–	–	1	1
Educational Counseling	–	–	–	1	–
Educational Psychology	–	–	–	–	2
English					
Composition	–	–	–	5	5
Criticism	–	–	–	2	2
Language	5	5	–	4	3
Literature	–	–	–	2	–
Modern Testing	–	–	–	2	2
Pronunciation	–	–	–	3	3
Geography	2	2	–	–	–
History	2	2	–	–	–
Home Economics (Boys/Girls)	–/1	–/1	–/1	–	–
Hygiene & First Aid (Boys/Girls)	–	–/2	–	–	–
Kurdish Language	–	1	–	–	–
Management & Supervision	–	–	2	–	2
Mathematics	3	3	–	–	–
Methods of Educational Research	–	–	–	2	–
Methods of Teaching					
Arabic	–	–	3	2	2
Art	–	–	1	2	–
English	–	–	4	3	2
General	2	–	–	–	–
Geography & History	–	–	2	–	–
Kurdish	–	–	1	–	–
Mathematics	–	–	3	–	–
Music	–	–	1	–	–
Physical Education	–	–	1	–	2
Problems	–	2	–	–	–
Reading & Writing	–	–	2	–	–
Religion	–	–	2	–	2
School & Society	–	–	2	–	–
Sciences	–	–	2	2	–
Music	1	1	–	–	–
National & Social Studies	2	2	1	1	1
Physical Education	1	1	–	–	–
Physics	–	2	–	–	–

Psychological Health & Special Education		–	–	–	–	1
Psychology						
Child		–	2	–	–	–
Educational		–	–	2	–	–
General		2	–	–	–	–
Religion		2	2	–	–	–
School Health		–	–	2	–	1
Totals	Boys	33	35	34	32	32
	Girls	33	38	35	32	32

In 1986-87, there were 39 five-year teacher training institutes (17 for men, 20 for women, 2 coeducational) with a total of 1,169 teachers and 27,039 students. Students enroll in this program either because they definitely want to be primary school teachers or do not have Intermediate Baccalaureate grades high enough to enroll in a preparatory school.

The **institutes of fine arts** in Baghdad (established in 1935), Basrah, Mosul (1977), and Sulaimaniyah offer a three-year post-intermediate school program to train teachers of art (calligraphy, ceramics, modern styles of painting and sculpture, and traditional Arab design), drama (cinema and theater), and music (traditional Arab music and Western music). Admission is based upon the Intermediate Baccalaureate, plus recommendations from teachers and an audition or portfolio. Graduates receive a **Diploma in Primary Education—Fine Arts** and are authorized to teach in primary, intermediate, and preparatory schools. Some are admitted to the academies of fine arts of the Universities of Al-Mustansiriyah and Baghdad. In 1986-87, the four institutes of fine arts had a total of 238 teachers and 1,873 students.

Programs Following Preparatory School

The Ministry of Education offers two one-month kindergarten teacher training programs (pre-service, for new graduates, and in-service, for experienced teachers). Both programs lead to a **Certificate of Participation**. Candidates usually have a Diploma in Primary Education. (NOTE: Other Certificate of Participation programs offered by the Ministry of Education are described in the next section of this chapter.)

In the 1960s, post-preparatory **teacher training institutes** (also known as **institutes for preparation of teachers,** and as **primary teacher training institutes**) introduced a two-year program to train teachers of human sciences or physical education. Programs for teachers of English or fine arts were added in 1985. The curriculum is illustrated in Table 2.13 and is similar to that offered during the last two years of the five-year post-Intermediate Baccalaureate program, except for the field of specialization. Graduates receive a **Diploma in Primary Education—[Specialization]**. They may be assigned to be general primary school teachers, or they may teach only their field of specialization, depending upon the country's needs.

Table 2.13. Two-Year Post–Preparatory School Program for Teachers of English, Fine Arts, Human Sciences, or Physical Education Offered at a Teacher Training Institute, 1975 and 1977

	1975		1977	
Subject Year	1	2*	1	2†
Agriculture & Gardens	–	–	1	–
Arab Society	2	–	2	2
Arabic Language & Religion	3	–	3	–
Art & Handicrafts	–	–	2	–
Audio-Visual Aids	–	2	–	–
Biology	2	–	–	–
Educational & Child Psychology	3	–	–	–
Educational Evaluation	–	–	–	2
Educational Psychology	–	–	–	2
English Language	3	–	3	–
Kurdish Language	§	–	–	–
Mathematics	–	–	2	–
Methods of Teaching Arabic	–	3	–	3
Methods of Teaching Art	–	–	–	1
Methods of Teaching English	–	3	–	3
Methods of Teaching Kurdish	–	§	–	–
Methods of Teaching Mathematics	–	–	–	3
Methods of Teaching Modern Mathematics	–	3	–	–
Methods of Teaching Music & Anthems	–	–	–	1
Methods of Teaching Physical Education	–	–	–	1
Methods of Teaching Practical Activities	–	4	–	–
Methods of Teaching Religion	–	–	–	1
Methods of Teaching Sciences	–	2	–	3
Methods of Teaching Social Sciences	–	2	–	3
Methods of Teaching the Alphabet	–	3	–	2
Modern Mathematics	3	–	–	–
Music & Anthems	–	–	1	–
New Trends in Primary Education	3	–	–	–
Physical Education	–	–	1	–
Principles of Curricula	–	–	2	–
Principles of Education	–	–	2	–
Practical Activities‡	3	–	–	–
Psychology	–	–	3	–
Sciences	–	–	2	–
Social Sciences	–	–	4	–
Totals	22	22*	28	27†

*First semester only; the second semester is devoted to practice teaching.

†Six weeks in the second semester is spent on practice teaching.

‡Agriculture & School Gardening, Drawing & Sculpture, Handicrafts, Music & Anthems, or Sports & Physical Education.

§Two hours at the Teacher Training Institute in Arbil.

In 1975-76, there were 11 two-year post-preparatory teacher training institutes (2 for men, 3 for women, 6 coeducational) with 241 teachers (161 men, 80 women) and 8,377 students (3,105 men and 5,272 women). In 1986, there were five two-year teacher training institutes: one each in Amarah, Arbil, Baghdad, and Mosul, and one in Baghdad which prepared teachers of slow learners. In 1986-87, they had a total of 274 teachers and 5,198 students.

Formerly, three-year post-preparatory school programs to train intermediate school and preparatory school teachers were offered by the **Higher Institute of Languages**, the **Higher Institute of Physical Education**, and the **Higher Teachers Training Institute**. These programs were discontinued in the 1960s. (See chapter III for a description of these institutions.)

Programs Following a Bachelor's Degree

Since 1977, the Ministry of Education has offered a six-month training program for bachelor of arts or bachelor of science degree graduates of a university college of arts or college of science who have been assigned to teach specific arts or science subjects in an intermediate school or preparatory school. Graduates of this program receive a **Certificate of Participation**. From 1980 to 1985, 9,959 teachers were prepared in this program, compared to 44,726 who were graduates of the teacher training schools and teacher training institutes.

The Ministry of Education offers short-term (two-week to six-month) courses to train experienced teachers newly assigned to an administrative position in a kindergarten, primary school, intermediate school, preparatory school, or teacher training institute. Graduates of these programs receive a **Certificate of Participation**.

The Ministry of Education also offers a three-month program in counseling for graduates of a bachelor of arts degree program in psychology. Approximately 75 persons enroll in this program each year. Upon completion, they receive a **Certificate of Participation** and are assigned to intermediate schools as counselors. This program will be terminated in 1988 because the bachelor of arts degree programs in counseling in the colleges of education of the Universities of Al-Mustansiriyah and Basrah will then be producing graduates in this field. (NOTE: For another Certificate of Participation program offered by the Ministry of Education, see the previous section of this chapter.)

The Department of Education and Psychology of the College of Arts of the University of Baghdad offers a one-year program of study leading to a **Higher Diploma in Education**. The program prepares graduates of colleges other than a college of education to be teachers in specific fields for intermediate and preparatory schools.

Non-Credit Programs for Teachers

The **Institute for the Development of English Language Teaching in Iraq** (commonly referred to as IDELTI) was established in May 1971 by the Ministry of Education and the British Council. It offers the following non-credit programs:

1. A short-term (up to three months) program for primary school teachers (25 hours per week for day students, 15 hours per week for evening students), covering five topics—general English, methods of teaching and text analysis, methods of teaching writing, phonetics and spoken English, and testing.
2. A long-term (six months) program for primary school teachers (15 hours per week for evening students), covering the same topics as the short term program.
3. A short-term (up to three months) program for secondary school teachers (25 hours per week for day students, 15 hours per week for evening students), covering seven topics—linguistics, methods of teaching, methods of teaching writing, phonetics, spoken English, testing, and text analysis.
4. A long-term (six months) program for secondary school teachers (15 hours per week for evening students), covering the same subjects as the short term program.
5. A short-term (up to three months) program in English for special purposes for governmental employees (9 hours per week for evening students), covering three topics—general English, special English, and spoken English.
6. A long-term (six months) program in English for special purposes for governmental employees (9 hours per week), covering the same subjects as the short-term program.

Those who complete one of the IDELTI programs receive a **Certificate of Completion** that shows the nature and length of the program, and the grade received. Those who do not pass all of the examinations receive instead a **Certificate of Attendance**.

III. Institutions Supervised by the Ministry of Higher Education and Scientific Research

The Ministry of Higher Education and Scientific Research, established in 1970, supervises the two major groups of tertiary institutions: the universities and the technical institutes. It now makes most decisions concerning university curricula, admissions requirements, facilities construction, financing, and assignment of faculty members. (Prior to 1970, the universities were autonomous.) At the present time, this Ministry supervises the following 10 universities: Al-Mustansiriyah, Anbar, Baghdad, Basrah, Kufa, Mosul, Qadisiyah, Salahaddin, Technology, and Tikrit (see chapter III, sections A and F for details on these universities). (The University of Al-Bakr, supervised by the Ministry of Defense, is described in chapter IV, section D.) The Ministry of Higher Education and Scientific Research also oversees 20 technical institutes (see chapter III, sections A and F). Seven additional technical institutes are being planned.

In 1980, 1,848 students were enrolled in university graduate programs; 84,857 in university undergraduate programs; and 20,649 in the technical institutes. Altogether, they represented 10.2% of the age group.

A. Historical Development

Universities

In 1223, *Khalifa* (Caliph) Al-Mustansir Billah established the Mustansiriyah School in Baghdad. The school evolved into the University of Al-Mustansiriyah, one of the first Islamic universities and one of the most famous universities of the Middle Ages. It was destroyed by the Mongols in the seventeenth century. From that time until World War II, Iraq was part of the Ottoman Empire. Tertiary education was not reintroduced until 1908 when a College of Law was established in Baghdad. The college was closed in 1914 and reopened in 1920.

Between 1920 and 1955, 10 other tertiary-level institutions were established, all in Baghdad. They were the colleges of Agriculture (1950); Commerce (1947); Engineering (1921); Literature (1949); Medicine (1927); Pharmacy (1936); Science (1949); and Veterinary Medicine (1955); Queen Aliyah College, a college for women (1946); and the Higher Teachers Training Institute (1927). In 1956, these 11 institutions and a new college of dentistry were united under the name University of Baghdad.

In the late 1950s and early 1960s, public colleges were established in Basrah and Mosul. They were made affiliates of the University of Baghdad. At the same time, private colleges were established in Basrah and Mosul and made affiliates of the University of Al-Mustansiriyah.

In 1963, the Iraqi Teachers Union re-established the University of Al-Mustansiriyah as a private evening university in Baghdad, designed to serve employed persons seeking part-time or evening university programs. Also in that year, Al-Sha'ab University was established in Baghdad as a private institution designed to serve the same persons. In 1964, the University of Al-Mustansiriyah and Al-Sha'ab University were merged to form University College, a private institution affiliated with the University of Baghdad. In 1965, University College was renamed the University of Al-Mustansiriyah and made an independent private institution.

In 1967, the public colleges in Basrah and Mosul became units of a new University of Basrah and University of Mosul, respectively. In 1968, the University of Sulaimaniyah was established in Sulaimaniyah in northeastern Iraq. In 1981, it was moved to Arbil (also in northeastern Iraq) and renamed the University of Salahaddin.

In 1974, the private colleges in Basrah and Mosul were detached from the University of Al-Mustansiriyah and attached to the universities in the respective cities. At the same time the University of Al-Mustansiriyah became a public institution. In 1975, the College of Engineering Technology of the University of Baghdad was merged with the College of Technology of the University of Al-Mustansiriyah to form the University of Technology.

In January 1988, four new public universities were established, partly by a reorganization of existing colleges and technical institutes and partly by the establishment of new colleges. The new institutions are the Universities of Anbar, Kufa, Qadisiyah, and Tikrit. In October 1987, the government approved the re-introduction of private institutions at the tertiary level, and private universities are now being developed.

Over the years, there have been many other independent tertiary-level institutions in Iraq. Some of them were closed but most of them were reorganized into colleges and attached to one of the universities. For example, until 1979 there were four religious institutions: Al-Imam Al-A'dham College, Al-Najaf University, Islamic Studies Religious College, and Osool Al-Deen Religious College. In that year, Al-Najaf University became the College of Islamic Studies of the University of Al-Mustansiriyah. Al-Imam Al-A'dham College absorbed the other two colleges and then merged with the College of Al-Shari'a of the University of Baghdad.

Similarly, many of the colleges of the universities have been merged, divided, reorganized, and renamed over the years. For example, the College of Commerce and Economics of the University of Baghdad was divided, merged and renamed, and then merged and renamed again. Thus, a student who studied business administration at the University of Baghdad sometime between 1956 and 1976 might have a grade report from the College of Commerce and Economics, the College of Commerce, the College of Commerce and Accounting, or the College of Administration and Economics, depending upon the years involved.

All tertiary institutions which could be identified and traced are described in section F below.

Technical Institutes

The technical institutes have also been known as **higher technical institutes** and as **institutes of technology**. The objective of the technical institutes is to train middle-level technicians in fields such as agriculture, business administration, forestry, industrial training, laboratory technology, and technology. Most of the technical institutes have the words *technical institute* in their name. While most of them offer a variety of academic programs, some offer only one type of program, such as agriculture.

The first technical institutes were established in the early 1950s to meet the growing need for highly trained technicians. By 1969, there were five technical institutes, all located in Baghdad: Institute of Administration, Institute of Applied Arts, Institute of Technology, Technical Institute of Agriculture, and Technical Institute of Medicine. In that year, they were all attached to the University of Baghdad.

In 1976, the Foundation of Technical Institutes was established as a division of the Ministry of Higher Education and Scientific Research, and all of the technical institutes became independent institutions under its jurisdiction. Since then, the number of technical institutes and their enrollment have increased dramatically. In 1975-76, there were 8 institutes for 5,766 students and 285 faculty members. In 1978-79, there were 17 institutes for 9,328 students. In 1984-85, there were 21 institutes for an estimated 24,000 students. In 1986-87, there were 20 institutes for an estimated 50,000 students.

In 1972, the five technical institutes admitted only 940 students or 6.5% of those admitted to tertiary institutions. In 1986, the 21 technical institutes admitted 25,000 new students or 42% of those admitted to tertiary institutions. The technical institutes are expected to eventually enroll more than 50% of all tertiary students.

Prior to June 1982, there were nine technical institutes of agriculture. The one in Aski-Kelek (Arbil Governorate) was closed at that time. The one in Bani Sa'ad (Diyala Governorate) was closed in June 1987. The technical institutes of agriculture in Hewega (Ta'mim Governorate), Kufa (Najaf Governorate), Kumait (Maysan Governorate), Kut (Wasit Governorate), Misayab (Babylon Governorate), Namrood (Nineveh Governorate), and Shatra (Thikar Governorate) were expanded and renamed technical institutes in June 1986. New technical institutes are being planned for the governorates of Dahuk, Diyala, Muthanna, Qadisiyah, Salah Al-Din, and Wasit.

Graduates of the technical institutes enter directly into employment in the fields of agriculture, business, health, or technology. However, the top 10% of the students in each specialty at each technical institute, plus the next three students in rank order by grade average, can enroll at a university. Each college of each university makes its own decisions concerning the exemptions which will be granted for work completed at a technical institute. The number of exemptions varies greatly and depends upon the technical institute program which was completed, the university field of study involved, and the university department's experience with transfer students.

B. Admission Procedures

A preparatory baccalaureate (see chapter II, section D) is required for admission to any university program. A preparatory baccalaureate or a vocational baccalaureate (see chapter II, sections D and E) is required for admission to any technical institute program and for admission to programs offered by a tertiary institution supervised by other ministries.

The type of institution and academic program to which a student can be admitted depends upon the type of baccalaureate received (literary, scientific, agricultural, commercial, industrial, or veterinary), and upon the score received on the baccalaureate examinations. On the preparatory baccalaureate examinations, grades in six subjects are counted for a maximum possible score of 600. The minimum passing score is 300. (For further information concerning the baccalaureate examinations, see chapter I, sections K and L; and chapter II, sections D and E.)

Admission to all university programs is selective. For university admission, a preparatory baccalaureate score of 504 (an average of 84% in each of the six subjects) is considered very high. A score of 438 (an average of 73% in each subject) is considered average. A score below 390 (an average of 65% in each subject) is considered weak.

Some scientific programs, such as engineering and medicine, have minimum grade requirements (usually 70) for specified individual subjects such as biology, chemistry, mathematics, or physics. Programs in art require a portfolio. Programs in music require an audition. Programs in physical education require evidence of physical fitness.

In 1986, the minimum baccalaureate scores of students admitted to the University of Baghdad ranged from 569 for the College of Medicine (an average of 94.8% in each subject on the preparatory baccalaureate, scientific section) to 438 for the Department of Geography in the College of Arts (an average of 73.0% in each subject on the preparatory baccalaureate, literary section). The lowest scores of students admitted in 1986 to a sample of the degree programs offered by the University of Baghdad are shown in Table 3.1. The lowest scores of students admitted to each of the colleges of medicine in 1986 are shown in Table 3.2.

Table 3.1. Lowest Baccalaureate Score of Admitted Students, 1986, University of Baghdad

Degree Program	Score	Degree Program *(continued)*	Score
Architectural Engineering	557	History	450
Biology	484	Irrigation Engineering	491
Chemical Engineering	497	Law	472
Chemistry	488	Mathematics	477
Civil Engineering	543	Mechanical Engineering	513
Computer Science	506	Medicine	569
Dentistry	544	Mineral & Petroleum Engineering	500
Electrical Engineering	522	Pharmacy	535
Electronics & Communications Engineering	533	Physics	481
English	459	Surveying Engineering	515
Geography	438	Veterinary Medicine	481
Geology	481		

Table 3.2. Lowest Baccalaureate Score of Admitted Students, 1986, Colleges of Medicine

College of Medicine	Score	Average
University of Al-Mustansiriyah–Baghdad	558	93.0%
University of Al-Mustansiriyah–Kufa	547	91.1%
University of Baghdad	569	94.8%
University of Basrah	535	89.1%
University of Mosul	549	91.5%
University of Salahaddin	542	90.3%

University programs in medicine, architectural engineering, civil engineering, and other engineering fields are the most popular, and therefore the most highly selective. They are followed in selectivity by university programs in other science fields, programs in non-science fields (administration and economics, agriculture, arts, education, humanities, social studies), programs offered by the technical institutes, programs offered by post-preparatory teacher training institutes, and programs offered by the specialized tertiary institutions administered by other ministries (such as midwifery, military and police science, nursing, and social welfare).

Students apply for admission to a specific department, and not to a college, university, technical institute, or specialized tertiary institution administered by one of the other ministries. Thus, students apply for admission to the Department of Electrical Engineering of the College of Engineering of the University of Baghdad rather than directly to the University or to the College of Engineering.

A student can list several department and university choices in order of preference, such as electrical engineering at the University of Baghdad, electrical engineering at the University of Technology, electrical engineering at the University of Mosul, physics at the University of Baghdad, physics at the University of Mosul, and electrical engineering at a technical institute.

Each department of each tertiary institution has an enrollment quota, determined in relation to Iraq's Development Plan. The number of students to be admitted is set annually via a joint consultation between the department, the college, the university, the Ministry of Higher Education and Scientific Research, and the Ministry of Planning. A tertiary program (e.g., computer science) with a shortage of spaces caused by inadequate facilities, equipment, or staff receives priority over other programs when the Ministry is allocating new resources.

The selection of students is handled by computer in the Ministry of Higher Education and Scientific Research, and takes into consideration each student's baccalaureate scores and choices of department and institution. Thus, for example, in 1976, when the range of scores for the approximately 1,000 students who were admitted to the College of Engineering of the University of Baghdad was 564 to 503 (out of 600) and too many students were tied at 503 for the last places in the College of Engineering, the college could expand its quota to accommodate all students with a score of 503, or terminate admission of new students at the 504 score level.

In 1986, all those who chose electrical engineering as their first choice of field of study and the Department of Electrical Engineering of the University of Baghdad as their first choice of department were admitted to that program until the enrollment quota had been filled. The last student admitted had a preparatory baccalaureate score of 522.

In popular fields such as electrical engineering, it is unlikely that many students who listed a particular program or department as their second choice would be admitted. In less popular fields such as geography, students who listed a program or department as their third or fourth choice might be admitted.

For the 1985-86 academic year, an applicant whose father or husband was killed in the Iran-Iraq war was admitted to any science program if the baccalaureate score was 420 or higher, and to any college of arts if the baccalaureate score was 300 or higher, no matter what the competitive requirements for regular applicants might have been. Beginning with the 1986-87 academic year, these applicants receive a 5-point bonus in each subject (30 points total) when their baccalaureate grades are considered for admission to bachelor's degree programs. In this way, an applicant who has a total score of 420 (an average of 70 in each subject) will be considered for admission as though the total score was 450 (an average of 75).

In 1986, the technical institutes and universities were instructed to accept all eligible preparatory school graduates. Thus, everyone who achieves a preparatory examination score of 300 or higher is guaranteed admission to some type of tertiary-level program. Those who received a preparatory baccalaureate in earlier years also are covered by this regulation.

Enrollment quotas still enable the most popular institutions and programs to continue to be selective. For example, in 1986, the lowest score in the class of 2,000 new students at the University of Technology was 480 (an average of 80.0%), attained by the last student admitted to the Department of Applied Science.

In a typical year, 45% to 55% of the preparatory school graduates do not make the cutoff for admission to a university program. If they wish, they can be placed at a technical institute, a post-preparatory teacher training institute, or a specialized post-preparatory institute supervised by one of the other ministries. Much of the increase in enrollment in tertiary institutions during the past three years has occurred at these institutions, particularly at the technical institutes.

A student who wants to study medicine, and whose preparatory baccalaureate grades barely missed the medical school admission requirements, can transfer to a college of medicine from a college of sciences or from a technical institute at the end of the first year if the grade earned in biology during that year is very good or excellent. Similarly, a student can transfer to a college of engineering or to one of the engineering departments of the University of Technology if the grades earned in mathematics and physics are very good or excellent.

C. Degree, Diploma, and Certificate Programs

Universities have some responsibility for designing their own curricula, within Ministry guidelines. Most curricula are revised approximately every five years. Curricula for the technical institutes are set by the Foundation of Technical Institutes.

Undergraduate Curricula. During the 1980s, English was deleted from the list of required courses in most bachelor's degree programs. Arab National Social Studies, sometimes called Cultural Education, is now a required course in all bachelor's degree programs. Each student must take this course for 60 hours per year for four years.

Beginning with the 1986-87 academic year, two hours of compulsory study in computer science were added to the first year of each bachelor's degree program. In 1987-88, two hours also were added to the second year. First year students study BASIC. Second year students study COBOL, FORTRAN, and/or PASCAL, depending upon the nature of the degree program in which they are enrolled. Students in colleges of engineering and colleges of science use computer laboratories for their projects and research at the third year, fourth year, master's, and doctoral levels.

Most students do their computer work on personal computers provided in computer laboratories. A few university computer centers (e.g., at the University of Mosul) have linked their mainframe to remote terminals, for use by students and faculty. In some instances, data bases, graphics, and 20 megabyte hard disks are available for student and faculty use.

Many student projects in computer science are designed to be useful at other educational levels. For example, several physics majors in the College of Education of the University of Mosul designed a computer graphics package which illustrates how the alignment of planets causes lunar and solar eclipses. This package has been reproduced for use by primary school teachers in their science classes.

Graduate Curricula. Prior to 1986-87, all master's degree students were required to take a non-credit English course, graded satisfactory/unsatisfactory. Some programs still require it. Students in colleges of law and politics were required to take a non-credit French course instead.

Beginning in 1986-87, graduate students in medicine must take an English examination before enrolling in graduate courses. Colleges of engineering were planning to add this requirement in 1987-88. If the examination is failed, a non-credit English course is required for the first semester. The examination is administered by faculty members of the department of English of a college of arts or college of education who also teach the non-credit courses.

Bachelor's Degree

The first university degree is a bachelor's degree. The most common degree is the **Bachelor of Science.** In addition to the pure sciences, it is awarded in agriculture, engineering, and other professional fields. Degrees offered by a college of arts or an academy of fine arts are usually called **Bachelor of Arts.** Colleges of education are just beginning to use the term **Bachelor of Education.** Health-related colleges award a **Bachelor of Dental Surgery; Bachelor of Medicine, Bachelor of Surgery** (or **Bachelor of Medicine and Surgery**); or **Bachelor of Veterinary Medicine and Surgery.** The two names for the degrees in medicine are used interchangeably. Either name can be abbreviated as M.B.B.S. or as M.B.Ch.B.

According to current (1986-87) standards, no bachelor's degree student may be required to take more than 32 hours per week of classroom and laboratory work, or to take more than eight subjects per year. A maximum of 35 credits may be required per year.

Beginning in 1985-86, students are permitted absences from a maximum of 10% of lectures and laboratory sessions. Eligibility requirements for supplementary examinations have also been made more strict. As a result of these changes, the percentage of students who pass examinations on the first attempt has increased in recent years: 49% in 1982-83, 50% in 1983-84, 55% in 1984-85, and 66% in 1985-86.

In most fields, a bachelor's degree requires four years of tertiary study. The exceptions are the degrees in architectural engineering, dental surgery, pharmacy, and veterinary medicine and surgery which require five years and the degrees in medicine and surgery which require six years plus one year of internship.

Prior to 1985-86, students in architectural engineering, dental surgery, engineering, medicine and surgery, pharmacy, science, and veterinary medicine and surgery could take a maximum of 10 years to complete a bachelor's degree program. The maximum now is seven years. Students in all other fields could formerly take a maximum of eight years. The maximum for them is now six years.

Prior to 1974, all bachelor's degrees in engineering required five years of study and bachelor's degrees in architecture required six years. The first year in each program involved general education. In 1974, the general year was dropped. Engineering programs were reduced to four years, and architecture programs were reduced to five years. The first students to complete the shorter programs graduated in 1978 (in engineering) and in 1979 (in architecture).

There is no professional association of architects. In earlier years, architects were not eligible for membership in the Iraqi Society of Engineers. In 1977, the name of the architectural degree programs was changed from architecture to architectural engineering so that the graduates would be eligible for membership in the Iraqi Society of Engineers. By U.S. criteria, the curriculum is still *architecture*, not *architectural engineering*.

Master's Degree

The second university degree is a master's degree. The most common master's degree is the **Master of Science.** Degrees offered by a college of arts or an academy of fine arts are usually called **Master of Arts.** Colleges of education are just beginning to use the term **Master of Education.** Master's degree programs in gynecology, internal medicine, pediatrics, and surgery were introduced by the colleges of medicine of the Universities of Baghdad and Mosul in 1986-87.

In previous years, some master's degree programs required one and one-half years of study, while a few programs required more than two years. All programs were standardized in the 1980s, except for the master's degree program in nuclear engineering; it was introduced by the College of Engineering of the University of Baghdad in 1987-88, and requires one year of study.

All other master's degree programs now require two years of study: one year of coursework and one year of thesis research, generally for a total of 30 to 36 credits. The most common pattern is 18 to 24 credits of coursework and 6 to 12 credits of thesis. Master's students have one advisor. The master's thesis must be defended publicly before a thesis panel that includes professors from other universities in Iraq. NOTE: In Iraq, the term *thesis* is generally used to describe master's and doctoral research. The term *dissertation* is generally used to describe a lower level of research, e.g., in a graduate-level higher diploma program. Thesis topics are sometimes selected from topics proposed by various ministries and other governmental agencies.

The maximum amount of time allowed for a master's degree program is now two years. However, if mitigating circumstances exist, a department may support a student's request for additional time. A college graduate council can grant a six-month extension and a university graduate council can grant a second six-month extension.

An exceptional student can complete a master's degree program in less than two years. A male student who does so with a grade of good or higher is permitted to enroll in a doctoral program without first completing compulsory military service.

Admission to master's degree programs requires a bachelor's degree in the same field of study with a grade average of at least 65%. Competitive programs usually require a grade average of at least 70% with no individual grades below 60%. Highly competitive fields such as medicine and engineering require a grade average of 75% or 80%. In fields which are less competitive, a student who ranks in the top 25% of a graduating class will usually qualify for admission to a master's degree program, even if the grade average is below 65%.

Applicants who have been injured in the war are granted a 5-point bonus for graduate admission purposes. Thus, an injured applicant with a grade average of 68% is considered for graduate admission as though the grade average is 73%.

Diploma

Prior to 1972, some universities had technical institute divisions which offered two-year and three-year **Diploma** programs. The technical institutes became separate institutions when the Foundation of Technical Institutes was established as a division of the Ministry of Higher Education and Scientific Research in 1972. None of these diplomas now are offered.

Higher Diploma

The **Higher Diploma** is awarded by universities and specialized technical institutions. Until the 1970s, two types of undergraduate university programs led to a higher diploma. Offered by some university departments, these programs required either one year of advanced undergraduate or three years of basic undergraduate study. Now all higher diplomas represent completion of graduate work.

Prior to 1983, many university departments offered one-year to three-year graduate programs leading to a Higher Diploma (sometimes also known as a Postgraduate Diploma). In most cases, those who performed well were permitted to use the higher diploma courses to meet the course requirements of a master's degree program. Most of these programs were terminated in 1983, but some departments had terminated them as early as 1980. Those university higher diploma programs that still exist are now offered primarily in medical fields.

Admission to university higher diploma programs now requires a bachelor's degree in the same field of study, with a grade average of at least 65%.

Competitive programs usually require a grade average of at least 70% with no individual grades below 60%. Programs in highly competitive fields such as medicine and engineering require a grade average of 75% or 80%. In fields which were less competitive, a student who ranked in the top 25% of a graduating class would usually qualify for admission to a higher diploma program, even if the grade average was below 65%.

Higher diplomas are awarded by some specialized technical institutions. For example, the Foreign Service Institute of the Ministry of Foreign Affairs offers a two-year post-bachelor's degree program leading to a higher diploma (see chapter IV, section E).

Doctor of Philosophy

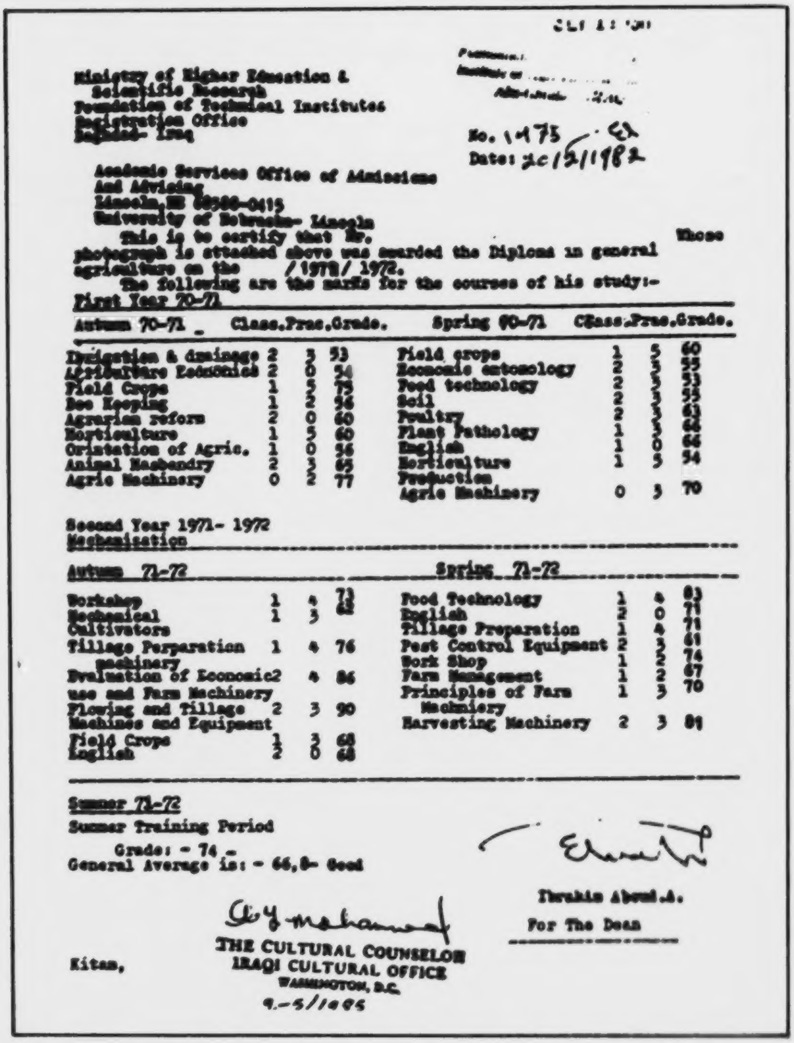
Doctor of Philosophy (Ph.D.) degree programs require three years of study beyond a master's degree: one year of coursework and two years of thesis research. They require a minimum of 60 credits beyond a master's degree. A minimum of 20 credits must be earned in coursework, and a maximum of 40 credits may be earned for the thesis, which always produces the majority of the credits.

Admission to doctoral programs is highly selective. Most departments have only one or two doctoral candidates at any one time. Doctoral students have two advisors. The doctoral thesis must be original publishable research. Unlike the master's thesis panel, the doctoral thesis panel includes a foreign professor. NOTE: In Iraq, the term *thesis* is generally used to describe master's and doctoral research. The term *dissertation* is generally used to describe a lower level of research, e.g., in a graduate-level higher diploma program. Thesis topics are sometimes selected from topics proposed by various ministries and other governmental agencies.

Diploma of Technician

Programs offered by the technical institutes require two calendar years (four semesters, plus six weeks of practical training each summer). They lead to a **Diploma of Technician in [Specialization]** (also called **Technical Diploma in [Specialization]**). These programs, which are 30% theoretical and 70% practical, involve 34 to 40 hours of coursework per week. Programs which are called *engineering* are really *engineering technology* by U.S. criteria. (For admission requirements, see chapter III, section B. For a sample grade report, see document 3.1.)

All technical institute programs are set by the Foundation of Technical Institutes. Institutes which offer a given program, such as computer technology, all follow the same syllabus. No technical institute offers all available programs.



Ministry of Higher Education &
Scientific Research
Foundation of Technical Institutes
Registration Office
Baghdad- Iraq

No. 1475 - 62
Date: 20/5/1982

Academic Services Office of Admissions
And Advising
Lincoln, NE 68588-0415
University of Nebraska- Lincoln

This is to certify that Mr. Whose photograph is attached above was awarded the Diploma in general agriculture on the /1972/ 1972.

The following are the marks for the courses of his study:-

First Year 70-71

Autumn 70-71	Class.	Prac.	Grade.	Spring 70-71	Class.	Prac.	Grade.
Irrigation & drainage	2	3	53	Field crops	1	5	60
Agriculture Economics	2	0	54	Economic entomology	2	3	55
Field Crops	1	5	75	Food technology	2	3	53
Bee Keeping	1	2	56	Soil	2	3	55
Agrarian reform	2	0	60	Poultry	2	3	63
Horticulture	1	5	60	Plant Pathology	1	3	66
Orintation of Agric.	1	0	56	English	1	0	66
Animal Husbandry	2	3	65	Horticulture Production	1	5	54
Agric Machinery	0	2	77	Agric Machinery	0	3	70

Second Year 1971- 1972
Mechanisation

Autumn 71-72				Spring 71-72			
Workshop	1	4	73	Food Technology	1	4	83
Mechanical Cultivators	1	3	62	English	2	0	71
Tillage Perparation machinery	1	4	76	Tillage Preparation	1	4	71
Evaluation of Economic use and Farm Machinery	2	4	86	Pest Control Equipment	2	3	61
Flowing and Tillage Machines and Equipment	2	3	90	Work Shop	1	2	74
Field Crops	1	3	68	Farm Management	1	2	67
English	2	0	68	Principles of Farm Mechniery	1	3	70
				Harvesting Machinery	2	3	81

Summer 71-72
Summer Training Period
Grade: - 74 -
General Average is: - 66,0- Good

Ibrahim Aboud.A.
For The Dean

Kitam,

THE CULTURAL COUNSELOR
IRAQI CULTURAL OFFICE
WASHINGTON, D.C.
9.-5/1985

3.1. Grade Report for the Diploma of Technician Program from the Technical Institute of Agriculture, Baghdad

Certificate

Since 1985-86, the technical institutes have offered an 18- to 24-month theoretical and practical training program for persons employed in production. The program leads to a **Certificate** which is considered in Iraq to be equivalent to a Diploma of Technician from a technical institute.

Some individual colleges of the universities, and most of the technical institutes, offer short-term non-credit adult education and in-service training courses, two days to three weeks in length. This is especially true of the colleges of administration and economics, education, and engineering. Enrollment per course is usually limited to 25 persons who are generally sponsored by their employers. Course fees are waived for faculty members who enroll in courses offered by their own college or technical institute.

D. Libraries

Universities have both centralized and decentralized libraries. Centralized libraries have open stacks and usually a two-week time limit for checking out books, with an option to renew. College and departmental libraries usually open their stacks only to faculty members and graduate students. Undergraduate students also may check books out of these libraries, but usually only for one week, with the option to renew.

All university libraries are open 8:00 a.m. to 6:00 p.m., Saturday through Wednesday (full school days), and 8:00 a.m. to 1:00 p.m. on Thursdays (the short school day). During examination periods, they are open from 8:00 a.m. to 8:00 p.m.

Faculty members request new books by title and number of copies needed. Libraries attempt to fill these requests but are hampered somewhat by limitations on foreign exchange.

Most university libraries have photocopy machines (e.g., Minolta), which students can use to copy pages from books. The fee ranges from 25 *fils* to 50 *fils* per page (8 to 16 cents at the official exchange rate).

Each master's and doctoral student is required to submit 25 copies of the bound thesis to the university. These copies are distributed to the Ministry of Higher Education and Scientific Research, and to the central library and relevant college and departmental libraries of each Iraqi university.

E. Faculty Members

University and technical institute professors are assigned to their positions by the Ministry of Higher Education and Scientific Research, in consultation with university or technical institute administrators. Most professors have completed graduate work at a foreign university. Some are foreign citizens.

Approximately 300 foreign citizens come to Iraq each year to serve as short-term visiting professors for periods ranging from three weeks to three months or longer.

Each university faculty member is ranked as an assistant (e.g., laboratory assistant), assistant lecturer, lecturer, assistant professor, associate professor, or professor. Two valuable or innovative research papers are required for promotion from assistant lecturer to lecturer. Three papers are required for promotion from lecturer to assistant professor. Four papers are required for promotion to associate professor, and another four for promotion to professor.

The universities pay for research and field work expenses. Faculty members can use university laboratories, computers, and research centers for their research. They can also receive assistance from research librarians.

The typical fulltime teaching load of a faculty member is 20 to 25 hours per week of lecture and laboratory instruction. Only associate professors and professors supervise the research of doctoral students.

To meet the need for new faculty members caused by a dramatic increase both in the number of tertiary-level programs and in the enrollment of tertiary-level students in 1986-87 and 1987-88, employees of government agencies who have master's or doctoral degrees have been added to the faculties of tertiary-level institutions as part-time professors. They are required to devote six hours per week to university duties in addition to their regular employment responsibilities. Those who have a master's degree serve as part-time professors at the technical institutes and in bachelor's degree programs at the universities. Those who have a doctoral degree serve as part-time professors in master's and doctoral programs, or as thesis advisers.

Most colleges of each university are self-contained. That is, the college's faculty members teach all required and elective courses which a student may take in the college's degree programs. As a result, each university is likely to have four or more departments of mathematics, physics, and other commonly required subjects. There are a few exceptions. The University of Mosul splits some faculty appointments between the Colleges of Agriculture and Forestry, Engineering, and Science, and the Computer Center. The faculty members of the College of Medicine of the University of Mosul teach some courses in the College of Dentistry. And the Department of Physics of the College of Science of the University of Mosul provides courses for students enrolled in the Colleges of Agriculture and Forestry, Dentistry, Medicine, Science, and Veterinary Science (but not the Colleges of Education or Engineering, both of which have their own physics departments). In all of these cases, these are temporary measures, in effect only until improved finances allow each college to establish its own departments and hire its own faculty members.

Faculty members are encouraged to conduct research jointly with industry and governmental agencies one to two days per week. The colleges of administration and economics and the colleges of engineering have consulting centers which assist in identifying and developing applied research projects.

Each faculty member is eligible for a one-year sabbatical after four years of service at the rank of assistant professor or higher. A research project approved by the department, the college, the university, and the Ministry of Higher Education and Scientific Research is required before a sabbatical is granted.

Promotion of faculty is based upon research, while salaries are based upon seniority. The retirement age is 63, but it can be extended to 65. Retirees can give lectures after retirement for extra income.

F. Individual Tertiary-Level Institutions

Former and current Iraqi tertiary-level institutions, supervised by the Ministry of Higher Education and Scientific Research, are described in this section in alphabetic order. For a general discussion of these institutions, see chapter III, sections A, B, C, D, and E. Wherever possible, the following information is given for each institution: current and former names, historical background, enrollment and faculty statistics, programs offered and credentials awarded, and curricula. Additional information on any particular institution may be found in descriptions of other universities, technical institutes, or colleges with which the institution was affiliated at some point in its development. For those tertiary institutions supervised by other ministries or by international organizations, see chapters IV and V, respectively. Many tertiary institutions have been known by more than one name. For a specific institution that cannot be found in this section, see Appendix C.

AL-HIKMA UNIVERSITY OF BAGHDAD

Also known as the UNIVERSITY OF AL-HIKMA, this university was established in Zafaraniya, a suburb of Baghdad (Baghdad Governorate), in 1956 by the New England (U.S.) Province of Jesuits. In November 1968, control of the university was turned over to the government. During the summer of 1969, the university was divided and merged with the Universities of Al-Mustansiriyah and Baghdad. Requests for academic records for the period 1956-1969 should be directed to the Registrar of the University of Baghdad, with explicit mention of the fact that the student had enrolled at Al-Hikma University of Baghdad.

Al-Hikma University offered bachelor of science degree programs in business administration and applied physics (see currriculum for each below). The program in applied physics evolved into a program in physics and engineering science, and then finally into civil engineering. A bachelor of arts degree program in English was introduced in 1963; the first students graduated in 1967.

The bachelor of science curriculum in business administration offered in 1959-63 included the following courses, with hours per week noted in parentheses: *Year 1*—Arabic I (3), economics (3), English I (3), history (3), and mathematics and statistical analysis (3). Total: 15 hours per week. *Year 2*—accounting I (4), Arabic II (3), economic geography and development (3), English II (3), and logic (3). Total: 16 hours per week. *Year 3*—accounting II

(3), business law (3), industrial organization (3), philosophy (4), and statistics and corporation finance (3). Total: 16 hours per week. *Year 4*—accounting III (3), ethics (3), marketing and industrial relations (3), psychology (3), and sociology (3). Total: 15 hours per week.

The bachelor of science curriculum in physics and engineering science offered in 1959-63 included the following courses, with hours per week noted in parentheses: *Year 1*—Arabic (3), calculus I (3), English I (3), mechanics and optics (4), and qualitative and quantitative chemistry (4). Total: 17 hours per week. *Year 2*—calculus II (3), drawing and surveying (4), electricity and magnetism (4), English II (3), and logic (3). Total: 17 hours per week. *Year 3*—acoustics and thermodynamics (4), differential equations and advanced calculus (3), electronics (3), philosophy (4), and statics and dynamics (4). Total: 18 hours per week. *Year 4*—atomic, nuclear, and solid state physics (3); ethics (3); fluid mechanics and heat transfer (3); psychology (3); and strength of materials and metallurgy (3). Total: 15 hours per week.

The language of instruction in all programs was English. The academic year consisted of two 16-week semesters (September to June) and a summer session. The following grading scale was used: 90-100 = A, 80-89 = B, 70-79 = C, 60-69 = D, 0-59 = F.

In 1962, the university became coeducational. In 1965, it had 33 fulltime and 28 part-time faculty members and 483 students. In January 1968, it had 590 students: 211 in business administration, 272 in civil engineering, and 107 in liberal arts. In 1965, it had a library of 35,000 volumes.

AL-IMAM AL-A'DHAM COLLEGE

Established in Karkh, a suburb of Baghdad (Baghdad Governorate), in the eleventh century as a religious school called AL-IMAM AL-AAZAM, this college was renamed DAR EL-ALOUM in 1937, and AL-IMAM AL-A'DHAM COLLEGE in 1946. It was also known as AL-IMAM AL-A'DHAM COLLEGE OF ISLAMIC STUDIES and as IMAM AL-A'DHAM RELIGIOUS COLLEGE. It offered a bachelor of arts degree program in Islamic jurisprudence, for men only. Originally under the supervision of the Ministry of Awqaf and Religious Affairs, this college was transferred to the Ministry of Higher Education and Scientific Research in 1974. In January 1979, it absorbed the Islamic Studies Religious College and Osool Al-Deen Religious College (both in Baghdad) and became an affiliate college of the University of Baghdad. In the 1980s, it was merged into the College of Al-Shari'a of the University of Baghdad.

In 1948-49, there were 9 teachers and 100 students. In 1970-71, there were 20 teachers and 140 students. In 1978-79, there were 30 teachers and 292 students, and in 1982-83, 34 teachers and 516 students.

AL-NAJAF UNIVERSITY

Located in Najaf in south-central Iraq, at a shrine at the burial site of Imam Ali (cousin and son-in-law of Mohammed and leader of the Shi'ite sect of

Islam), this university was established circa 1029 as AL-FICKH RELIGIOUS COLLEGE (also known as AL-FIQIH RELIGIOUS COLLEGE, AL-NAJAF THEOLOGICAL UNIVERSITY, COLLEGE OF JURISPRUDENCE, and COLLEGE OF RELIGION AND PHILOSOPHY). A private institution, it enrolled many Shi'ite students from other countries. The name was changed to Al-Najaf University circa 1935. Originally under the supervision of the Ministry of Awqaf and Religious Affairs, this university was transferred to the Ministry of Higher Education and Scientific Research in 1974 and became a public institution. In January 1979, it became the COLLEGE OF ISLAMIC STUDIES of the University of Al-Mustansiriyah, but remained at its original site in Najaf. In 1988, the college was transferred to the University of Kufa.

Until 1974, Al-Najaf University offered a six-year preparatory program and a four-year tertiary program in Islamic jurisprudence, divided into three stages:

Al-Muqaddimat (Introductory Studies)—Required subjects: Arabic language (***an-nahw*** [syntax], ***as-sarf*** [inflection and grammar], and ***al-balaghah*** [prosody]); and logic. Optional subjects: literature, mathematics, other subjects.

As-Sutuh (Intermediate Studies)—Required subjects: principles of jurisprudential inference, and rational jurisprudence. Optional subjects: ***ilm-ul-kalam*** (traditions), philosophy, and ***tafsiyr*** (exegesis of the Qur'an).

Bahth Al-Kharij (Research and Higher Studies) (Also known as *Al-Buhuth*)—Required subjects: principles of jurisprudence, and practical jurisprudence.

The first two stages involved individualized studies, with one or more students (usually less than seven but on rare occasions as many as 20) choosing and receiving instruction from a teacher whom they knew to have a higher knowledge of the subjects involved. A lesson was never less than half an hour in duration, and usually no longer than one hour. The third stage involved group study, with those who passed the first two stages gathering around one of the prominent ***mujtahids*** (or an ***imam***) who lectured on either principles of jurisprudence or practical jurisprudence, explaining problems and engaging the students in discussion and debate.

There were no examinations. A thesis was required for completion of the second and third stages. The first two stages together theoretically involved two years of study but could take 10 years or more. The dropout rate was high. At the end of stage two, a student was prepared to become a ***mujtahid*** (specialist in *Shari'a*, Islamic jurisprudence).

Upon completion of two years of study in the third stage, and a thesis written about a problem of jurisprudence, the student received a Certificate of ***Ijtihad*** (Achievement), or a **Shahadatul 'Alimiyah** (Certificate of Knowledge). Each of these certificates was considered equivalent to a Bachelor of Arts degree in Islamic jurisprudence from the College of Al-Shari'a of the University of Baghdad. Since 1974, the University (now College) has offered a four-year bachelor of arts degree program in Islamic jurisprudence.

There were no formal educational buildings. Lessons were held in a variety of places: courtyards, shrines, teachers' homes, and mosques. There were a variety of "schools," but these were residential facilities which housed students who came to Najaf from other communities. In 1970, the university had 9 fulltime, 14 part-time, 4 foreign faculty members, and 683 male students.

AL-SHA'AB UNIVERSITY

Established in 1963 to serve the growing number of employed Iraqis seeking part-time or evening university programs, Al-Sha'ab University merged with the University of Al-Mustansiriyah in 1964 to form UNIVERSITY COLLEGE, part of the University of Baghdad. In 1965, University College became the UNIVERSITY OF AL-MUSTANSIRIYAH, an independent private institution. In 1974, the University of Al-Mustansiriyah became a public institution.

COLLEGE OF ACCOUNTANCY AND BUSINESS ADMINISTRATION

Established in Mosul in 1968 as a private institution, this college was renamed the COLLEGE OF ADMINISTRATION AND ECONOMICS in 1969 and affiliated with the University of Al-Mustansiriyah. In 1974, it became part of the University of Mosul.

COLLEGE OF AGRICULTURE, ABU-GHRAIB. *See* University of Baghdad, College of Agriculture.

COLLEGE OF AGRICULTURE, HAMMAM AL ALIL. *See* University of Mosul, College of Agriculture and Forestry.

COLLEGE OF COMMERCE, BAGHDAD. *See* University of Baghdad, College of Administration and Economics.

COLLEGE OF COMMERCE, BASRAH

Established in Basrah in 1964 as a private institution sponsored by the Basrah branch of the Iraqi Economists Society, this college was affiliated with and supervised by the University of Baghdad. The college offered bachelor's degree programs in accounting, business administration, and commerce, following the curriculum of the College of Commerce of the University of Baghdad. In 1965, the college's affiliation was transferred to the University of Al-Mustansiriyah. In 1974, it became the COLLEGE OF ADMINISTRATION AND ECONOMICS of the University of Basrah.

COLLEGE OF ENGINEERING, BAGHDAD. *See* University of Baghdad, College of Engineering.

COLLEGE OF LAW, BAGHDAD

Established in Baghdad in 1908, this college was the first tertiary institution established in Iraq after the destruction of the University of Al-Mustansiriyah by the Mongols in the seventeenth century. It was closed in 1914 and reopened in 1920. In 1956, it was one of the 12 colleges which formed the University of Baghdad. (See University of Baghdad, College of Law and Politics.)

COLLEGE OF LITERATURE, BAGHDAD. *See* University of Baghdad, College of Arts.

COLLEGE OF MEDICINE, BAGHDAD. *See* University of Baghdad, College of Medicine.

COLLEGE OF MEDICINE, MOSUL. *See* University of Mosul, College of Medicine.

COLLEGE OF PHARMACY, BAGHDAD. *See* University of Baghdad, College of Pharmacy.

COLLEGE OF SCIENCE, BAGHDAD. *See* University of Baghdad, College of Science.

COLLEGE OF VETERINARY MEDICINE. *See* University of Baghdad, College of Veterinary Medicine.

FINE ARTS INSTITUTE

In 1962, the preparatory-level Institute of Fine Arts, Baghdad established a Higher Studies Department with an entering class of second year students. During 1963-64, the department was transferred from the Institute of Fine Arts to the University of Baghdad. In 1964, it became the Fine Arts Institute (also known as the ACADEMY OF ART, INSTITUTE FOR FINE ARTS, and as the INSTITUTE OF FINE ARTS), an independent institution under the Ministry of Education. In 1967, it became the ACADEMY OF FINE ARTS of the University of Baghdad. At first the Institute offered higher diploma programs in dramatic arts, painting, and sculpture. Later they became bachelor of arts degree programs, and a degree program in ceramics was added. There were 11 students in the first graduating class in June 1965. In 1965-66, the institute had 23 professors and 110 students.

HIGH ENGINEERING INSTITUTE

Also known as the INSTITUTE OF ENGINEER TRAINING, this institute was later incorporated into the University of Baghdad. (See University of Baghdad, High Engineering Institute.)

HIGHER AGRICULTURE INSTITUTE

Established in Abu-Ghraib (10 miles west of Baghdad) in 1950, this institute offered two-year post-preparatory programs. In 1952, it was converted to a COLLEGE OF AGRICULTURE, and the programs were expanded to four years, leading to a bachelor of science degree. It was one of the 12 colleges which formed the University of Baghdad in 1956.

HIGHER INSTITUTE OF ACCOUNTANCY, BAGHDAD

This institute was also known as the HIGH INSTITUTE OF ACCOUNTANCY, BAGHDAD; the HIGHER ACCOUNTANCY INSTITUTE, BAGHDAD; and the VOCATIONAL INSTITUTE OF ACCOUNTANCY, BAGHDAD. It offered a three-year program leading to a Diploma in Accountancy. Graduates were admitted to the fourth year of the bachelor's degree program in commerce at the College of Commerce and Economics of the University of Baghdad. In 1963, this institute was merged with the commerce section of the College of Commerce and Economics of the University of Baghdad to form the COLLEGE OF COMMERCE AND ACCOUNTANCY of the University. In 1969, that college merged with other divisions of the University to form the current COLLEGE OF ADMINISTRATION AND ECONOMICS.

HIGHER INSTITUTE OF ACCOUNTANCY, MOSUL

This institute was also known as the HIGH INSTITUTE OF ACCOUNTANCY, MOSUL; the HIGHER ACCOUNTANCY INSTITUTE, MOSUL; and the VOCATIONAL INSTITUTE OF ACCOUNTANCY, MOSUL. It offered a 27-month program leading to a Diploma in Accountancy. In 1974, this institute was merged with the College of Administration and Economics in Mosul of the University of Al-Mustansiriyah and attached to the University of Mosul. (See University of Mosul, College of Administration and Economics.)

HIGHER INSTITUTE OF INDUSTRIAL ENGINEERING

Established in 1955, this institute was also known as the HIGH APPLIED ENGINEERING INSTITUTE, HIGHER INDUSTRIAL ENGINEERING INSTITUTE, and INSTITUTE OF HIGHER INDUSTRIAL ENGINEERING. It offered a three-year program of study in industrial engineering leading to a diploma (midway between a diploma of technician from a technical institute and a bachelor's degree in engineering from a university). This institute later became part of the University of Baghdad.

HIGHER INSTITUTE OF PHYSICAL EDUCATION

Established in Baghdad in 1955, this institute was also known as the INSTITUTE OF PHYSICAL TRAINING. It offered a three-year program of study leading to a Diploma in Physical Education. Its graduates serve as teachers of physical education, or as coaches or youth workers. This institute is now the COLLEGE OF PHYSICAL EDUCATION of the University of Baghdad.

HIGHER TEACHERS TRAINING INSTITUTE

Located in Baghdad, this institute was established in 1923 as a series of in-service evening courses for primary school teachers. In 1927, the courses were reorganized and the department of the Ministry of Education which offered them became the Higher Teachers Training Institute. It has also been known as the HIGHER INSTITUTE OF TEACHERS, HIGHER INSTITUTE OF TEACHER TRAINING, HIGHER TEACHERS COLLEGE, HIGHER TEACHERS TRAINING COLLEGE, TEACHER TRAINING COLLEGE, and TEACHER TRAINING INSTITUTE. This institute offered a four-year post-preparatory program to train intermediate and preparatory school teachers. Women were first admitted in 1937. In 1954, it had 736 students. It was one of the 12 institutions which formed the University of Baghdad in 1956. In 1958, its name was changed to the COLLEGE OF EDUCATION.

HIGHER TECHNICAL INSTITUTE

Established in Baghdad in November 1960, this institute received a five-year development grant from UNESCO (United Nations Educational, Scientific, and Cultural Organization) in February 1961 and additional financial assistance from West Germany. It was also known as the COLLEGE OF ENGINEERING TECHNOLOGY, HIGH TECHNICAL INSTITUTE, HIGHER INDUSTRIAL INSTITUTE, and INSTITUTE OF TECHNOLOGY. In 1967, the name was changed to the COLLEGE OF INDUSTRIAL ENGINEERING (also translated as INDUSTRIAL COLLEGE). In 1969, it merged with the Engineering Science Department of Al-Hikma University of Baghdad and became the COLLEGE OF INDUSTRIAL ENGINEERING of the University of Baghdad. At that time, its primary purpose was the preparation of teachers for industrial vocational schools. In 1970, a program in industrial engineering technology was added, and the name of the college was changed to the COLLEGE OF ENGINEERING TECHNOLOGY (also translated as COLLEGE OF TECHNOLOGY ENGINEERING). In 1975, the College of Engineering Technology was merged with the College of Technology of the University of Al-Mustansiriyah to form the UNIVERSITY OF TECHNOLOGY.

This institute and college offered five-year bachelor of science degree programs in automotive engineering technology, building construction (structures) technology, electrical engineering technology, and mechanical engineering technology. Admission was based upon the preparatory baccalaureate, scientific section, or the vocational baccalaureate, industrial section. The first year of each program involved general studies; the last four years were specialized. The first degrees were awarded to 28 students in September 1965.

Technical teacher training classes were offered by the building construction, electrical, and mechanical departments. After 1970, these classes were offered by a separate technical teacher training department.

The institute also offered a two-year part-time evening program leading to a bachelor of science degree. Admission was based upon a diploma from a three-year technical institute.

In 1965-66, the institute had 17 senior lecturers, 19 technical instructors, and 12 part-time teachers, and 319 students. In 1970, as the College of Engineering Technology of the University of Baghdad, the college had 38 fulltime, 32 part-time, and 4 foreign faculty members, and 756 students (747 men, 9 women).

INSTITUTE FOR DRAFTING AND TECHNICAL DRAWING

This institute was replaced by the technical institutes in 1972.

INSTITUTE FOR SURVEYING

This institute was replaced by the technical institutes in 1972.

INSTITUTE OF ADMINISTRATION, KARKH

Established in 1976 in Karkh, a suburb of Baghdad (Baghdad Governorate), this technical institute offers programs in justice management, marketing, office management, and stores (warehouse) management. In 1978-79, there were 200 students and 29 teachers. In 1984-85, there were 1,586 students (914 or 57.6% women) and 68 teachers (16 or 23.5% women).

INSTITUTE OF ADMINISTRATION, RISAFA

Established in Risafa, a suburb of Baghdad (Baghdad Governorate), in 1964 as the HIGHER SECRETARIAL INSTITUTE of the University of Baghdad, this institute has also been known as the HIGHER INSTITUTE OF SECRETARIAL STUDIES, SECRETARIAL INSTITUTE, and VOCATIONAL INSTITUTE OF SECRETARIAL STUDIES. It offered a three-year program of study leading to a Higher Diploma in Secretarial Studies. It was separated from the university and renamed the Institute of Administration, Risafa in 1969.

This technical institute offers programs in accounting, computer systems (since 1986-87, software only), hospital management, insurance management, office management, records (documents) management, stores (warehouse) management, and statistics. The program in office management is the only program in Iraq which trains teachers of typing for the commercial vocational schools.

The curriculum for the Diploma of Technician in Accounting, offered in 1974-76, included the following courses, with hours per week listed in parentheses: *First Year*—Arab society (2), commercial English (2), English typing (2), financial math (2), principles of accounting (6), principles of administration (3), principles of economics (2), principles of insurance (2), and principles of statistics (2). Total: 23 hours per week. *Second Year*—Arabic language (2), Arabic typing (2), auditing (2), calculating machines (2), companies accounting (2), cost accounting (3), fiscal and commercial legislation (3), governmental accounting (3), and intermediate accounting (4). Total: 23 hours per week.

In 1964-65, there were 286 students. In 1978-79, there were 1,300 students and 99 teachers; in 1984-85, there were 3,207 students (1,919 or 59.8% women) and 146 teachers (56 or 38.3% women).

INSTITUTE OF ADMINISTRATION TECHNOLOGY, BAGHDAD

It is anticipated that this technical institute will open in 1989. It will be located in Zafaraniya, a suburb of Baghdad (Baghdad Governorate).

INSTITUTE OF APPLIED ARTS, BAGHDAD

In 1946, QUEEN ALIYAH COLLEGE was established in Baghdad as a college for women. In 1951, a department of art was added. In 1956, this college was one of the 12 colleges which formed the University of Baghdad. The college was renamed AL-TAHREER COLLEGE in 1958; in the 1960s, it was renamed the COLLEGE FOR WOMEN. In 1969, the College for Women was reorganized, and its Department of Art became the INSTITUTE OF HOME ARTS. In the 1970s, this institute was designated a technical institute, separated from the university, and renamed the Institute of Applied Arts. In 1975, it became coeducational.

The institute offers three programs:

1. Commercial and industrial design (graphic arts)—graduates work in blanket, carpet, and textile factories; with the press; and in publishing houses. New programs may be developed in commercial and industrial design, and in techniques of window displays.
2. Commercial (industrial) clothing—graduates work in clothing factories.
3. Social work—graduates are trained in the care of children and the handicapped, and in social research techniques. They work with the juvenile courts, and in the Ministries of Education, Justice, Labor and Social Affairs, and Youth.

This technical institute formerly offered a program of study leading to a diploma in home art, interior design, and furniture making. It required two calendar years, which was considered the equivalent of three academic years.

In 1978-79, there were 37 teachers and 206 students. In 1984-85, there were 33 teachers (28 or 84.8% women) and 366 students (132 or 36.0% women).

INSTITUTE OF DATES AND DATE-PALM RESEARCH, BAGHDAD

Established in 1967 with assistance from the Food and Agricultural Organization (FAO), this institute has also been known as the DATE CULTIVATION RESEARCH INSTITUTE. A science research center, it does not offer any academic programs.

INSTITUTE OF FORESTRY

Located in Baghdad, this institute offered a three-year program of study leading to a diploma. The institute was later incorporated into the University of Baghdad. In 1964, the institute was moved to Mosul and merged with the College of Agriculture and Forestry of the University of Mosul.

INSTITUTE OF HIGHER INDUSTRIAL ENGINEERING. *See* Higher Institute of Industrial Engineering.

INSTITUTE OF LANGUAGES

Located in Baghdad, this institute was also known as the COLLEGE OF LANGUAGES and HIGHER INSTITUTE OF LANGUAGES. It became a part of the University of Baghdad before 1965. It offered a three-year program of study leading to a Diploma in Foreign Languages. This program was expanded to a four-year bachelor of arts degree program in 1965. In 1968, the institute was merged with the Colleges of Education and Literature of the University of Baghdad to form the university's COLLEGE OF ARTS.

INSTITUTE OF PREPARATION OF INDUSTRIAL TRAINERS, BAGHDAD

Located in Zafaraniya, a suburb of Baghdad (Baghdad Governorate), this technical institute was established in 1979 as the DEPARTMENT OF PREPARATION OF INDUSTRIAL TRAINERS (also called DEPARTMENT OF INSTRUCTORS' TRAINING) of the Institute of Technology, Baghdad. In 1987, it became a separate institute. It is also known as the INDUSTRIAL TRAINERS INSTITUTE and the INSTITUTE OF INDUSTRIAL TRAINERS.

The institute offers a two-year program of study leading to a Diploma of Technician — Industrial Training — [Specialization]. Students choose one of four specializations: automotive, electrical, electronic, or mechanical. (In earlier years, the former department also offered building, chemical, and textile specializations.) Graduates work as industrial trainers (laboratory and workshop teachers) in preparatory-level vocational schools. Each year this institute admits 720 graduates of industrial vocational schools.

INSTITUTE OF PUBLIC ADMINISTRATION

Established in 1959, and also known as the HIGHER INSTITUTE OF PUBLIC ADMINISTRATION, this institute offered a four-year diploma program in public administration. The institute was later incorporated into the University of Baghdad.

INSTITUTE OF TECHNOLOGY, BAGHDAD

This technical institute was established in 1965 as the TECHNOLOGY INSTITUTE of the University of Baghdad by a merger of two divisions of the university: Higher Institute of Industrial Engineering (also known as High Applied Engineering Institute) and High Engineering Institute. In 1969, it was separated from the university, renamed Institute of Technology, Baghdad, and relocated in Zafaraniya, a suburb of Baghdad (Baghdad Governorate), on the former campus of Al-Hikma University of Baghdad. It has also been known as ZAFARANIYA TECHNICAL INSTITUTE.

Programs are offered in the following departments:

1. Chemical industries technology: industrial units operation, safety control technology (since 1986-87), textile technology, and (formerly) petroleum refining.
2. Civil engineering technology: building and construction, building maintenance (since 1986-87), irrigation and drainage, road construction (since 1986-87), surveying, and water plan operation (water resource management, since 1986-87). The last students graduated from a program in engineering drawing in 1987. (The department of civil engineering technology might be split in the future into departments of building and highway technology, and water resources technology.)
3. Electrical engineering technology: computer technology (since 1986-87, hardware only), electrical installation maintenance, electrical machines, electrical networks, electronic maintenance technology, electronics, medical instruments, power engineering technology, and power transmission and distribution. The program in computer technology is illustrated in Table 3.3.
4. Mechanical engineering technology: mechanical power and maintenance, metals manufacturing, and printing (since 1986-87). The curriculum in metals manufacturing is illustrated in Table 3.4. Programs in automotive technology and refrigeration and air conditioning have been discontinued.
5. Preparation of industrial trainers: since 1979, programs in automotive technology, chemical industry technology, civil engineering technology, electromechanics, electronics, and mechanical engineering technology for trainers (laboratory and workshop teachers) for industrial vocational schools. This department became the Institute of Preparation of Industrial Trainers in 1987.

This technical institute also offers basic courses for employees in industry and the general public; specialized courses for in-service training; and short courses for continuing education (e.g., a one-week course on solar energy).

Table 3.3. Diploma of Technician Curriculum in Computer Technology, 1986-88, Electrical Engineering Technology Department, Institute of Technology, Baghdad

Subject	**Hours/Week**			**Subject** *(continued)*	**Hours/Week**		
First Year	**Lec/Lab/P**			**Second Year**	**Lec/Lab/P**		
Applied Mathematics	1	2	–	Applications of Microcomputers	–	4	–
Computer Applications	1	1	–	Assembly Language	–	4	–
Digital Circuits	2	2	–	Control Systems	2	2	–
Electrical DC-AC Circuits	2	4	–	Electronic Measurement Instruments	2	2	–
Electronic & Pulse Circuits	2	4	–	Integrated Circuits	2	2	–
Engineering & Electrical Drawing	–	3	–	Microcomputers	4	4	–
National & Social Education I	2	–	–	National & Social Education II	2	–	–
Technical English	1	1	–	Project	–	–	4
Workshop	–	–	6	Totals	12	18	4
Totals	11	17	6				

Lec = Lecture, Lab = Laboratory, and P = Practice.

Table 3.4. Diploma of Technician Curriculum in Metals Manufacturing, 1980-82, Mechanical Engineering Technology Department, Institute of Technology, Baghdad

Subject	**Hours/Week**			**Subject**	**Hours/Week**		
First Semester	**Lec/Lab/P**			**Third Semester**	**Lec/Lab/P**		
Cultural Education I	2	–	–	Cultural Education III	2	–	–
Engineering Drawing	–	–	8	Electrical Technology	2	–	2
Mathematics I	4	–	–	Industrial Drawing II	–	–	4
Mechanics I	3	–	3	Manufacturing Processes II	3	–	3
Report Writing	2	–	–	Metallurgy II	3	–	2
Workshops I	–	12	–	Workshop Tools	4	–	–
Totals	11	12	11	Workshops III	–	12	–
Second Semester				Totals	14	12	11
Cultural Education II	2	–	–	**Fourth Semester**			
Industrial Drawing I	–	–	4	Cultural Education IV	2	–	–
Manufacturing Processes I	2	–	3	Industrial Management	4	–	–
Mathematics II	4	–	–	Manufacturing Processes III	3	–	3
Mechanics II	3	–	2	Metallurgy III	3	–	2
Metallurgy I	2	–	3	Production Requirements	4	–	4
Workshops II	–	12	–	Project	–	6	–
Totals	13	12	12	Workshops IV	–	6	–
				Totals	16	12	9

Lec = Lecture, Lab = Laboratory, and P = Practice.

In the long-term future, this technical institute might add a two-year or three-year bachelor of technology degree program. Admission would be restricted to those who graduated in the top 20% of each specialization at this institute and at the other technical institutes.

The institute has a central computer center with 50 personal computers (PCs), and three satellite laboratories with a total of 40 PCs (10 in the civil department, 20 in electrical, and 10 in mechanical). The following computer brands are represented: Falcon (U.K.), NCR (U.S.), NEC (Japan), Olivetti (Italy), and Yamaha (Japan). The Department of Preparation of Industrial Trainers kept its 15 PCs when it became the Institute of Preparation of Industrial Trainers, a separate technical institute.

In 1970-71, there were 651 students (65 or 9.9% women) and 87 teachers. In 1978-79, there were 3,278 students (623 or 19.0% women) and 186 teachers. In 1984-85, there were 5,042 students (812 or 16.1% women), 238 teachers (67 or 28.1% women) and 292 technicians supervising the laboratories and workshops (108 or 36.9% women).

IRAQI ACADEMY

Established in 1948, this non-academic institution is supervised by the Ministry of Higher Education and Scientific Research. Its mission is to preserve and disseminate Arabic, Kurdish, and Syriac language, literature, history, science, and culture. The highest linguistic authority in Iraq, it is responsible for developing Arabic, Kurdish, and Syriac equivalents for new artistic and scientific words from other languages.

ISLAMIC STUDIES RELIGIOUS COLLEGE

Also known as the COLLEGE OF RELIGION AND PHILOSOPHY and COLLEGE OF RELIGIOUS JURISPRUDENCE, this private college in Baghdad offered a bachelor of arts degree program in Islamic studies. Originally under the supervision of the Ministry of Awqaf and Religious Affairs, it was transferred to the Ministry of Higher Education and Scientific Research in 1974. In January 1979, it was absorbed by Al-Imam Al-A'dham College. In 1954, there were 101 students. In 1970-71, there were 816 students (110 or 15.5% women) and 26 teachers.

OSOOL AL-DEEN RELIGIOUS COLLEGE

Located in Baghdad, this private college for men offered a bachelor of arts degree program in Islamic studies. Originally under the supervision of the Ministry of Awqaf and Religious Affairs, the college was transferred to the Ministry of Higher Education and Scientific Research in 1974. In January 1979, it was absorbed by Al-Imam Al-A'dham College. In 1970-71, there were 22 teachers and 419 students.

QUEEN ALIYAH COLLEGE

Established in Baghdad in 1946, this women's college offered a two-year preparatory school program and a post-preparatory school program to train intermediate and preparatory school teachers. In 1951, a department of art was added. In 1954, the college had 349 students. It was one of the 12 colleges which formed the University of Baghdad in 1956. A home economics program was added in 1958, and the name of the college was changed to AL-TAHREER COLLEGE. It was later renamed the COLLEGE FOR WOMEN.

ROYAL COLLEGE OF MEDICINE. *See* University of Baghdad, College of Medicine, Baghdad.

SCHOOL OF NURSING. *See* University of Baghdad, College of Nursing.

TECHNICAL INSTITUTE, AMARAH

Established in Amarah (Maysan Governorate) in 1979, this technical institute has also been known as the TECHNICAL INSTITUTE, MAYSAN. It offers programs in accounting; chemical industry technology (industrial units operation [since 1986-87]); civil engineering technology (building and construction, and engineering drawing); electrical engineering technology (electrical installation, electrical machines, and electronics); and mechanical engineering technology (metals manufacturing, and refrigeration and air conditioning).

In 1980-81, there were 555 students (69 or 12.4% women) and 32 teachers. In 1984-85, there were 1,797 students (243 or 13.5% women) and 42 teachers (7 or 16.6% women).

TECHNICAL INSTITUTE, ARBIL

Established in Arbil (Arbil Governorate) in 1978, this technical institute was closed in 1982. It offered programs in civil engineering technology (building and construction, engineering drawing, and surveying) and mechanical engineering technology (metals manufacturing). The programs were transferred to the technical institutes in Kirkuk, Mosul, and Ramadi. The buildings are now used by the College of Engineering of the University of Salahaddin. There were 150 students each in 1978-79 and 1981-82. In those same years, the number of teachers totalled 29 and 30, respectively.

TECHNICAL INSTITUTE, BANI SA'AD

Established in Bani Sa'ad (Diyala Governorate) in 1980 as the TECHNICAL INSTITUTE OF AGRICULTURE, BANI SA'AD, this institute was renamed the Technical Institute, Bani Sa'ad in 1986. It was also known as TECHNICAL INSTITUTE, DIYALA, and TECHNICAL INSTITUTE OF AGRICULTURE, DIYALA. The institute offered programs in animal production, farm mechanization (beginning 1985-86), horticulture (beginning 1985-86), irrigation and drainage, and metals manufacturing (beginning 1986-87). The technical institute was closed in June 1987.

In 1980-81, there were 49 teachers (6 or 12.2% women) and 178 students (42 or 23.5% women). In 1984-85, there were 117 teachers (22 or 18.8% women) and 332 students (60 or 18.0% women). In 1985-86, 450 new students were admitted. In 1986-87, 800 new students were admitted.

TECHNICAL INSTITUTE, BASRAH

This technical institute was established in 1972 in Basrah (Basrah Governorate) as the INSTITUTE OF TECHNOLOGY, BASRAH. It offered programs in administration and technology. The curriculum in building and construction, offered in 1974-76, included the following courses and, in addition, required summer training: *Year 1*—Arabic language, Arabic social education, building materials, elements of civil engineering I, engineering drawing and descriptive geometry, English language, fundamentals of concrete, mathematics I, and surveying I. *Year 2*—concrete, construction machinery, contracts and specifications, cost estimating and final measurements, elements of civil engineering II, mathematics II, site construction, structural details and architectural drawing, and surveying II.

The institute was reorganized in 1976 and renamed the Technical Institute, Basrah. It offers programs in administration (accounting, computer systems [since 1986-87, software only], office management, and stores [warehouse] management); chemical industry technology (industrial units operation, and measurement and control technology); civil engineering technology (building and construction, engineering drawing, and surveying); clinical pathology; electrical engineering technology (electrical installation, electrical machines, and electronics); and mechanical engineering technology (automotives, metals manufacturing, and refrigeration and air conditioning).

In 1978, there were 800 students and 94 teachers. In 1982-83, enrollment reached 1,660. In 1984-85, there were 3,334 students (1,035 or 31.0% women) and 95 teachers (17 or 17.8% women).

TECHNICAL INSTITUTE, HEWEGA

Established in Hewega (Ta'mim Governorate) in 1979 as the TECHNICAL INSTITUTE OF AGRICULTURE, HEWEGA, this institute was renamed Technical Institute, Hewega in 1986. It has also been known as the TECHNICAL INSTITUTE OF AGRICULTURE, TA'MIM. It offers programs in animal production, farm mechanization (since 1986-87), field crops, horticulture, office management, plant production, and water plan operation (water resources management [since 1986-87]). In 1981-82, there were 87 students (14 or 16.0% women) and 42 teachers (1 or 2.3% women). In 1984-85, there were 149 students (21 or 14.0% women) and 42 teachers (3 or 7.1% women).

TECHNICAL INSTITUTE, HILLA

Established in Hilla (Babylon Governorate) in 1972 as the INSTITUTE OF ADMINISTRATION, BABYLON, this institute was also known as the INSTITUTE OF TECHNOLOGY, BABYLON and TECHNICAL INSTITUTE OF MANAGEMENT, BABYLON. It was renamed Technical Institute, Hilla in 1977. It offers programs in administration (accounting, and stores [warehouse] management); civil engineering technology (building and construction, engineering drawing, and surveying); electrical engineering technology (electrical installation, and electronics); and mechanical engineering technology (automotives, metals manufacturing, and textiles).

In 1978-79, there were 300 students and 45 teachers. In 1981-82, there were 1,100 students (520 or 47.2% women) and 116 teachers. In 1984-85, there were 3,699 students (989 or 26.7% women) and 90 teachers (16 or 17.7% women).

TECHNICAL INSTITUTE, KIRKUK

Established in Kirkuk (Ta'mim Governorate) in 1976, this institute has also been known as the INSTITUTE OF TECHNOLOGY, TA'MIM and TECHNICAL INSTITUTE, TA'MIM. It offers programs in administration (accounting, and stores [warehouse] management); chemical industry technology (industrial units operation); civil engineering technology (building and construction, and engineering drawing); electrical engineering technology (electrical installation, electrical machines, electronics, and laboratory instrumentation technology); and mechanical engineering technology (automotives, and metals manufacturing).

In 1978-79, there were 200 students and 36 teachers. In 1980-81, there were 1,276 students (264 or 20.6% women) and 47 teachers (3 or 6.3% women). In 1984-85, there were 3,528 students (986 or 27.9% women) and 90 teachers (23 or 25.5% women).

TECHNICAL INSTITUTE, KUFA

Established in Kufa (Najaf Governorate) in 1981 as the TECHNICAL INSTITUTE OF AGRICULTURE, KUFA (also known as TECHNICAL INSTITUTE OF AGRICULTURE, NAJAF), this institute was renamed the Technical Institute, Kufa in 1986. It offers programs in animal hygiene, animal production, clinical pathology, farm mechanization, horticulture, metals manufacturing, office management, plant production, and plant protection. In 1984, it had 75 faculty members (67 men, 8 women) and 440 students (323 men, 117 women).

TECHNICAL INSTITUTE, KUMAIT

Established in Kumait (Maysan Governorate) in 1976 as the TECHNICAL INSTITUTE OF AGRICULTURE, KUMAIT, this technical institute was also known as the INSTITUTE OF TECHNICAL AGRICULTURE, MAYSAN, and TECHNICAL INSTITUTE OF AGRICULTURE, MAYSAN. It was renamed the Technical Institute, Kumait in 1986. It offers programs in animal production, field crops, plant production, soil and land reclamation, and surveying (since 1986-87). In 1978-79, there were 234 students (35 or 14.9% women) and 106 teachers. In 1984-85, there were 121 students (14 or 11.5% women) and 60 teachers (9 or 15.0% women).

TECHNICAL INSTITUTE, KUT

Established in Kut (Wasit Governorate) in 1980 as the TECHNICAL INSTITUTE OF AGRICULTURE, KUT, this institute was also known as the TECHNICAL INSTITUTE OF AGRICULTURE, WASIT. It was renamed Technical Institute, Kut in 1986. It offers programs in animal production, automotive technology, farm mechanization, horticulture, plant production, and stores (warehouse) management. In 1980-81, 2 (5.7%) of the 35 teachers and 16 (13.4%) of the 119 students were women. In 1984-85, 2 (4.6%) of the 43 teachers and 29 (16.4%) of the 176 students were women.

TECHNICAL INSTITUTE, MISAYAB

Established in Misayab (Babylon Governorate) in 1979 as the TECHNICAL INSTITUTE OF AGRICULTURE, MISAYAB, this institute was also known as the TECHNICAL INSTITUTE OF AGRICULTURE, BABYLON. It was renamed the Technical Institute of Agriculture, Misayab in 1986. The institute offers programs in agricultural cooperatives, automotive technology, farm mechanization, field crops, irrigation and drainage, plant production, soil and land reclamation, and water plan operation (water resources management). In 1980-81, there were 500 students (161 or 32.2% women) and 110 teachers (12 or 10.9% women). In 1984-85, there were 275 students (46 or 16.7% women) and 133 teachers (26 or 12.0% women).

TECHNICAL INSTITUTE, MOSUL

This technical institute was established in 1976 in Mosul (Nineveh Governorate) by a merger of the Institute of Technical Medicine, Mosul (also known as the Technical Institute of Medicine, Mosul) and the Institute of Technology, Mosul (both established in 1972). It offers programs in administration (accounting, computer systems [software only], library management, office management, and stores [warehouse] management); chemical industry technology (industrial units operation); civil engineering technology (building and construction, engineering drawing, and surveying); clinical pathology; electrical engineering technology (computer technology [since 1986-87, hardware only], electrical installation, electrical machines [see Table 3.5 for the curriculum], electronics, and precise instrumentation technology [since 1986-87]); and mechanical engineering technology (automotive, metals manufacturing, refrigeration and air conditioning, and textiles).

Table 3.5. Curriculum in Electrical Machines, 1981-83, Technical Institute, Mosul

Subject Hours/Week:	Lec	Lab	P
First Semester			
Arabic Culture I	2	–	–
Electric Technology	8	8	–
Engineering Drawing	–	4	–
Mathematics I	4	–	–
Mechanical Workshop	–	–	3
Technical Reports	2	–	–
Totals	16	12	3
Second Semester			
Arabic Culture II	2	–	–
Electrical Measuring Instruments	2	2	–
Electric Circuits	3	3	–
Electric Material & Installation	3	–	3
Electric Workshop	–	–	6
Engineering Electrical Drawing	–	4	–
Mathematics II	4	–	–
Totals	14	9	9
Third Semester			
Arabic Culture III	2	–	–
Electrical Machines I	5	6	–
Electrical Machines Maintenance I	–	–	6
Electrical Networks	3	3	–
Industrial Management	2	–	–
Power Electronics I	3	3	–
Totals	15	12	6
Fourth Semester			
Arabic Culture IV	2	–	–
Electrical Machines II	5	6	–
Electrical Machines Maintenance II	–	–	6
Power Electronics II	3	3	–
Project	–	–	6
Protection & Control Instruments	2	2	–
Totals	12	11	12

Lec = Lecture, Lab = Laboratory, P = Practice.

In 1978-79, there were 500 students and 56 teachers. In 1980-81, there were 2,097 students (659 or 31.4% women) and 118 teachers. In 1984-85, there were 3,468 students (806 or 23.2% women) and 180 teachers (48 or 26.6% women).

TECHNICAL INSTITUTE, NAJAF

Established in Najaf (Najaf Governorate) in 1978, this technical institute offers programs in administration (accounting, computer systems [software only], and office management); civil engineering technology (building and construction, and engineering drawing); electrical engineering technology (communications, electrical installation, and electrical machines); and mechanical engineering technology (automotive technology, and metals manufacturing).

In 1978-79, there were 150 students and 25 teachers. In 1981-82, there 904 students (300 or 33.1% women) and 52 teachers. In 1984-85, there were 2,495 students (560 or 22.4% women) and 63 teachers (5 or 7.9% women).

TECHNICAL INSTITUTE, NAMROOD

Established in Namrood (Nineveh Governorate) in 1980 as the TECHNICAL INSTITUTE OF AGRICULTURE, NAMROOD, this institute was also known as the TECHNICAL INSTITUTE OF AGRICULTURE, NINEVEH. It was renamed the Technical Institute, Namrood in 1986. It offers programs in animal hygiene, animal production, farm mechanization, field crops, horticulture, and plant production. In 1984, it had 130 faculty members (115 men and 15 women) and 208 students (180 men, 28 women).

TECHNICAL INSTITUTE, NASIRIYAH

This institute was established in Nasiriyah (Thikar Governorate) in 1980. It offers programs in accounting, electrical instruction, and metals manufacturing. In 1981-82, there were 18 teachers and 398 students (48 or 12.0% women). In 1984-85, there were 25 teachers and 589 students (105 or 17.8% women).

TECHNICAL INSTITUTE, RAMADI

Established in 1977 in Ramadi (Anbar Governorate), this technical institute offers programs in administration (accounting, computer systems [software only], office management, and stores [warehouse] management); chemical industry technology (ceramics and glass, and industrial units operation); civil engineering technology (building and construction, and engineering drawing); electrical technology (electrical installations, and electrical machines); and mechanical technology (automotive technology, metals manufacturing, mining technology, and refrigeration and air conditioning). In 1978-79, there were 309 students and 38 teachers. In 1984-85, there were 2,410 students (470 or 19.5% women) and 75 teachers (7 or 9.3% women).

TECHNICAL INSTITUTE, SHATRA

Established in Shatra (Thikar Governorate) in 1979 as the TECHNICAL INSTITUTE OF AGRICULTURE, SHATRA, this institute was also known as the TECHNICAL INSTITUTE OF AGRICULTURE, THIKAR. It was renamed the Technical Institute, Shatra in 1986. It offers programs in farm mechanization (since 1986-87), plant production, and power plant technology. In 1980-81, 2 (4.3%) of the 46 teachers and 18 (10.6%) of the 169 students were women. In 1984-85, 3 (8.1%) of the 37 teachers and 21 (15.0%) of the 140 students were women.

TECHNICAL INSTITUTE, SULAIMANIYAH

This technical institute was established in 1976 in Sulaimaniyah (Sulaimaniyah Governorate) by a merger of the Institute of Administration, Sulaimaniyah and the Technical Institute of Medicine, Sulaimaniyah (also known as the Institute of Technical Medicine, Sulaimaniyah), both established in 1973. It was closed in 1981. It offered programs in administration (accounting, and office management), agricultural cooperatives (until 1977), preventive medicine (medical therapy, until 1978), and technology (engineering drawing, and metals manufacturing). In 1980-81, there were 500 students and 50 teachers.

TECHNICAL INSTITUTE OF AGRICULTURE, ASKI-KELEK

Established in 1976 in Aski-Kelek (Arbil Governorate), this technical institute was also known as the INSTITUTE OF TECHNICAL AGRICULTURE, SULAIMANIYAH and TECHNICAL INSTITUTE OF AGRICULTURE, ARBIL. It offered programs in agricultural cooperatives, animal hygiene, animal production, and horticulture. It was closed in 1982. It will probably be reopened for the 1988-89 academic year. In 1981-82, there were 250 students and 100 teachers.

TECHNICAL INSTITUTE OF AGRICULTURE, BAGHDAD

Established in Abu-Ghraib (Baghdad Governorate) in 1964 as the HIGH INSTITUTE OF AGRICULTURE of the University of Baghdad, this institute originally offered a three-year program. In 1969, it was reorganized as an independent institution and renamed the Technical Institute of Agriculture, Baghdad. The program was shortened to two years. This technical institute has also been known as the INSTITUTE OF AGRICULTURAL TECHNOLOGY, BAGHDAD, and as the INSTITUTE OF TECHNICAL AGRICULTURE, BAGHDAD. It offers programs in animal hygiene, animal production, farm mechanization, field crops, plant protection (since 1986-87), and soil and land reclamation (since 1986-87). See document 3.1 for a sample grade report for a Diploma of Technician program. In 1978-79, there were 710 students and 303 teachers. In 1984-85, there were 1,154 students (413 or 35.7% women) and 204 teachers (34 or 16.6% women).

TECHNICAL INSTITUTE OF MEDICINE, BAGHDAD

Established in 1965 as the HIGH INSTITUTE OF MEDICAL TECHNOLOGY, part of the College of Medicine of the University of Baghdad, this institute became a separate institution under the name Technical Institute of Medicine, Baghdad in 1969. It has also been known as the INSTITUTE OF MEDICAL TECHNOLOGY, BAGHDAD, and as the INSTITUTE OF TECHNICAL MEDICINE, BAGHDAD. It offers programs in biomechanics (orthotics and prosthetics), clinical pathology (medical laboratory technology), and dental technology. A program in nursing was offered in earlier years.

In 1978-79, there were 350 students and 100 teachers. In 1981-82, 334 (43.0%) of the 775 students were women; there were 326 teachers. In 1984-85, 65 (51.1%) of the 127 teachers and 140 (13.2%) of the 1,053 students were women.

UNIVERSITY COLLEGE

Established in 1964 by the merger of two evening universities: Al-Sha'ab University, and the University of Al-Mustansiriyah, University College was affiliated with and supervised by the University of Baghdad. In 1964-65, 2,126 students were enrolled in second year courses in accounting, Arabic, business management, economics, education, foreign languages, law, mathematics, physics, and political science. The college did not enroll any new students in 1964, but it did in 1965. The first degrees would have been awarded in 1967, but the college became the UNIVERSITY OF AL-MUSTANSIRIYAH in 1965.

UNIVERSITY OF AL-MUSTANSIRIYAH (AL-JAMI'AT AL-MUSTANSIRIYAH)

Established in Baghdad in 1223 by *Khalifa* Al-Mustansir Billah as the MUSTANSIRIYAH SCHOOL, the University of Al-Mustansiriyah was one of the first Islamic universities. Its programs in Arabic, biology, hygiene, mathematics, medicine, rhetoric, *Shari'a* (Islamic jurisprudence), and theology were well-known during the Middle Ages. It had a library of 80,000 manuscripts. The university was destroyed by Mongols in the seventeenth century.

A new University of Al-Mustansiriyah was established in 1963 by the Iraqi Teachers Union as a private evening university to serve a growing number of employed Iraqis seeking part-time or evening university programs. In 1964, the university was merged with Al-Sha'ab University to form UNIVERSITY COLLEGE, an affiliate of the University of Baghdad. In 1965, University College became an independent private university under the name University of Al-Mustansiriyah. It became a public university in 1974. It is sometimes known as AL-MUSTANSIRIYAH UNIVERSITY.

In the 1960s and 1970s, private colleges in Basrah and Mosul were attached to the University of Al-Mustansiriyah, while public colleges in these two cities were attached to the University of Baghdad. In 1967, the public colleges were reorganized into the University of Basrah and University of Mosul, respectively. In 1974, when the University of Al-Mustansiriyah became a public institution, its colleges in Basrah and Mosul were transferred to the universities in the respective cities.

In 1988, three divisions of the university (the Academy of Fine Arts in Hilla, the College of Islamic Studies in Najaf, and the College of Medicine in Kufa) formed the nucleus of the new University of Kufa.

From 1963 to 1974, 30% of the students were enrolled in evening classes designed for the professional development of government officials. When the university became a public institution in 1974, its emphasis changed from part-time degree and non-degree programs to fulltime degree programs. At the same time, both its faculty and its students changed from predominantly part-time to predominantly fulltime status. Since 1975, approximately 95% of the students have been enrolled as fulltime day students in degree programs.

Some of the evening students are enrolled in bachelor's degree programs designed to be completed on a part-time basis over a period of five years. However, most of the bachelor's degree programs offered in the evening are designed as fulltime programs. Most students can, therefore, complete the requirements for a bachelor's degree in four years, day or evening.

In 1970-71, there were 11,025 students (17.5% women) and 55 fulltime and 507 part-time teachers; in 1981-82, there were 10,286 students (38.6% women) and 428 teachers. In 1986-87, there were an estimated 17,000 students and approximately 600 teachers. For the academic year 1985-86, the university offered 13 graduate programs, to which it admitted a total of 16 new graduate students. For the 1986-87 academic year, it offered 46 graduate programs, to which it admitted a total of 186 new graduate students.

In 1972-73, there were 60,000 volumes in the university's central library. There were 120,000 volumes in 1981-82, and 240,000 in 1986-87. There are also 13 college and departmental libraries.

The University of Al-Mustansiriyah has had the following academic divisions:

ACADEMY OF FINE ARTS—Established in Hilla in 1980, this academy offers bachelor of arts degree programs in plastic arts and dramatic arts (radio, television, and theater). Graduates are generally employed as artists or in the communications media. Some become teachers in intermediate schools, preparatory schools, and primary teacher training institutes. In 1988, this academy was transferred to the new University of Kufa.

AL-FIQIH RELIGIOUS COLLEGE. *See* College of Islamic Studies.

CENTER OF CONTINUING EDUCATION—Established in 1987, this center offers short-term (three-day to two-week), non-credit, in-service and adult education courses in all fields except education. Its courses are taught by regular faculty members of the university.

CENTER OF METHODS OF TEACHING AND TRAINING PROGRAMS—Established in 1987 by a reorganization of part of the College of Education, this center is responsible for providing orientation, pre-service training, and in-service training for new faculty members of this university. It also offers short-term (three-day to two-week), non-credit, in-service and adult education courses to employees in all fields of education, government, and industry. Its courses and programs are taught by faculty members from the College of Education.

COLLEGE OF ACCOUNTANCY AND BUSINESS ADMINISTRATION, BAGHDAD. *See* College of Administration and Economics, Baghdad.

COLLEGE OF ACCOUNTANCY AND BUSINESS ADMINISTRATION, MOSUL. *See* College of Administration and Economics, University of Mosul.

COLLEGE OF ADMINISTRATION AND ECONOMICS, BAGHDAD—Established in 1968, this college has also been known as the COLLEGE OF ACCOUNTANCY AND BUSINESS ADMINISTRATION, COLLEGE OF BUSINESS ADMINISTRATION AND ECONOMICS, and COLLEGE OF ECONOMICS AND ADMINISTRATION. It has offered the following programs:

1. Two-year diploma programs in accountancy, agricultural cooperatives (terminated in 1983), marketing, and stores (warehouse) management.
2. Three-year diploma programs in hotel management and tourism management (also called touristic institutions) which were terminated in 1986. The top 25% of the graduates were eligible to enroll in a bachelor of arts degree program.
3. A three-year diploma program in statistics (terminated in 1983).
4. Four-year bachelor of arts degree programs in administration (options in accounting, business administration, office management, and public

Table 3.6. Bachelor of Arts Curriculum in Economics, 1974-78, College of Administration and Economics, Baghdad, University of Al-Mustansiriyah

Subject	Hours/Week	Subject	Hours/Week
First Year		**Third Year**	
Accounting	3	Advanced Mathematics	2
Arab Society	2	Cost Accounting	2
Economic History I	2	Economic Development	3
Economics I	3	Economic Theory	3
Management	3	Economic Thought	3
Mathematics I	3	Economics of Labor	2
Readings in Economics (in English)	3	Income & Employment	3
		Mathematical Economics	2
Statistics I	3	Public Finance	3
Total	22	Total	23
Second Year		**Fourth Year**	
Economic History II	2	Agricultural Economics	2
Economic Resources	2	Econometrics	3
Economics	3	Economic Integration of Arab States	2
Economics in English	3	Economic Planning	3
Intermediate Accounting	3	Industrial Economics	2
Mathematics II	2	International Economics	3
Organizational Functions	2	Monetary Theory	3
Statistics II	3	Petroleum Economics	3
Total	20	Political Report	½
		Statistics III	3
		Total	24½

administration), economics, hotel and tourism management (since 1980-81), and statistics. The curriculum in economics is illustrated in Table 3.6.

5. Five-year part-time bachelor of arts degree programs (no longer offered) in accounting and business administration, and in statistics.
6. Two-year master of arts degree programs in administration, economics, hotel and tourism management (since 1987-88), and statistics.
7. A three-year doctor of philosophy degree program in economics (since 1986-87).

COLLEGE OF ADMINISTRATION AND ECONOMICS, BASRAH—This college was established in 1964 as the COLLEGE OF COMMERCE, a private institution sponsored by the Basrah branch of the Iraqi Economists Society. At that time, it was affiliated with and supervised by the University of Baghdad and offered bachelor of arts degree programs in accounting, business administration, and commerce, following the curriculum of the University of Baghdad's College of Commerce.

In 1965, the College of Commerce was renamed the COLLEGE OF ADMINISTRATION AND ECONOMICS and was attached to the University of Al-Mustansiriyah. It offered bachelor of arts degree programs in administration and economics.

In 1974, it became the College of Administration and Economics of the University of Basrah.

College of Administration and Economics, Mosul—This college was established in 1968 as the College of Accountancy and Business Administration, a private institution. In 1969, it was renamed the College of Administration and Economics and affiliated with the University of Al-Mustansiriyah. Also known as the College of Business Administration and Economics, it offered two-year diploma programs in administration and economics, and one-year advanced diploma (also known as higher diploma) programs in accounting and business administration (admission to which required a two-year diploma). Courses were offered in the evening, primarily for government employees. In 1974, this college became part of the University of Mosul.

College of Al-Fiqih. *See* College of Islamic Studies.

College of Arts—Established in 1963, this college has also been known as the College of Liberal Arts. It has six departments: Arabic, English, French, library science (transferred from the University of Baghdad in 1977), psychology and education (formerly only psychology), and translation. A Department of Sociology may be added in 1988-89. The Department of Translation was established in 1975 as part of the Department of English; it became a separate department in 1978.

The College of Arts has offered the following programs:

1. A one-year certificate program in library science (terminated in 1983).
2. A two-year certificate program in French (terminated in 1983).
3. A two-year diploma (also called undergraduate diploma) program in library science (terminated in 1983).
4. A one-year higher diploma (also called graduate diploma and postgraduate diploma) program in library science (terminated in 1983). This program required one calendar year: two terms of coursework, a research paper, and two months of practical training. Admission required a bachelor's degree in another field.
5. Four-year bachelor of arts degree programs in Arabic, English, French, library science, psychology (including educational psychology), and translation.
6. A one-year bachelor of arts degree program in sociology (no longer offered) requiring completion of three years of university work for admission.
7. A five-year part-time bachelor of arts degree program in English (no longer offered).
8. Master of arts degree programs in Arabic, library science, psychology, and translation (since 1985-86). A master of arts degree program in English is being planned.
9. A doctor of philosophy degree program in Arabic language and literature (since 1986-87).

College of Business Administration and Economics, Baghdad. *See* College of Administration and Economics, Baghdad.

College of Business Administration and Economics, Basrah. *See* College of Administration and Economics, Basrah.

College of Business Administration and Economics, Mosul. *See* College of Administration and Economics, Mosul.

College of Counseling—This college was in operation from 1977-80. Its program in counseling is now offered by the College of Education.

College of Dentistry—This college is being planned.

College of Economics and Administration, Baghdad. *See* College of Administration and Economics, Baghdad.

College of Education—This college was closed in 1970 and reopened in 1976. It offered a bachelor of arts degree program in kindergarten education until 1984. It now offers a variety of bachelor of arts (B.A.), bachelor of science (B.S.), master of arts (M.A.), master of education (M.Ed.), and master of science (M.S.) degree programs, as follows:

Field of Specialization	**Year Begun**	**First Graduate**
B.A. in Arabic Language	1987	1991
B.A. in Counseling	1984	1988
B.A. in English	1989 (planned)	1993
B.A. in Geography	1988 (planned)	1992
B.A. in History	1986	1990
B.A. in Educational and Psychological Sciences	1976	1980
B.S. in Biology	1989 (planned)	1993
B.S. in Chemistry	1988 (planned)	1992
B.S. in Computer Science	1987	1991
B.S. in Mathematics	1976	1980
B.S. in Physics	1976	1980
M.A. in History	(planned)	—
M.Ed. in Counseling	1987	1989
M.S. in Mathematics	1987	1989
M.S. in Physics	1987	1989

The bachelor of arts and bachelor of science degree programs may become bachelor of education programs in the future. The bachelor of arts degree program in counseling is designed to prepare educational guidance personnel for intermediate schools. Most of those who enroll in this program are primary school teachers who have at least three years of teaching experience and who are on educational leave. Upon completion of the four-year bachelor of arts degree program in counseling, primary school teachers are reassigned to intermediate schools as counselors. It is hoped that every intermediate school will have a counselor by the year 2000. Graduates of the bachelor of arts degree programs in fields other than counseling and graduates of the bachelor of science degree programs teach in intermediate schools, preparatory schools, vocational schools, and primary teacher training institutes.

Master of education graduates are employed as counselor supervisors in the Ministry of Education, or as faculty members at teacher training institutes or colleges of education.

The master of science degree programs admit graduates of a bachelor of science degree program of either a college of education or a college of science.

In the future there may be two options: one emphasizing the subject matter, the other emphasizing methods of teaching the subject matter.

In 1986-87, the College of Education had 64 faculty members and 1,495 students (140 enrolled in the counseling program, 22 in the graduate programs), and two libraries with a total of 2,000 volumes. The college supervises two intermediate-level laboratory schools.

COLLEGE OF ENGINEERING—The University of Al-Mustansiriyah has had two colleges of engineering. The first one, usually referred to as the COLLEGE OF TECHNOLOGY (see separate entry, below), was merged with the College of Engineering Technology of the University of Baghdad in 1975 to form the UNIVERSITY OF TECHNOLOGY.

The second College of Engineering was established in 1986 in facilities used by the College of Engineering of the University of Baghdad until that college moved to the University of Baghdad's central campus in 1985. In addition to the former University of Baghdad facilities, the new College of Engineering also inherited the mainframe computer and two bachelor's degree programs in mechanical engineering: agricultural mechanics engineering, and mechanics and textile engineering. This College of Engineering offers the following programs:

Field of Specialization	Year Begun	First Graduate
B.S. in Acoustical Engineering	1988 (planned)	1992
B.S. in Architectural Engineering	1987	1992
B.S. in Civil Engineering	1986	1990
B.S. in Electrical Engineering	1986	1990
B.S. in Environmental Engineering	1988 (planned)	1992
B.S. in Mechanical Engineering	1986	1990
M.S. in [Name of Field] Engineering	(planned)	—

This college uses the syllabi of the College of Engineering of the University of Baghdad. In 1986-87, it had 25 faculty members and 400 students enrolled in bachelor's degree programs in civil, electrical, and mechanical engineering. It expected to enroll 820 students in 1987-88 and to reach an enrollment of 2,000-2,500 by 1990.

COLLEGE OF ISLAMIC STUDIES—This college was formerly known as AL-NAJAF UNIVERSITY (see Al-Najaf University). It was renamed in January 1979 and attached to the University of Al-Mustansiriyah, although it remains located in Najaf in south central Iraq. It has also been known as AL-FIQIH RELIGIOUS COLLEGE, COLLEGE OF AL-FIQIH, COLLEGE OF ISLAMIC LAW AND SCIENCES, COLLEGE OF LAW AND ISLAMIC STUDIES, COLLEGE OF RELIGION AND PHILOSOPHY, and COLLEGE OF THEOLOGY. This college offers a four-year program of study leading to a Bachelor of Arts in *Fiqih* Studies (i.e., Islamic religious studies). Admission is based upon a preparatory baccalaureate, literary section. Graduates serve the Shi'ite Islamic community in the role of *imam*, teacher, or employee of the Ministry of Awqaf and Religious Affairs. Beginning in 1986-87, this college also offers a master of arts degree program in *Shari'a* (Islamic jurisprudence). In 1988, this college was transferred to the new University of Kufa.

College of Islamic Law and Sciences. *See* College of Islamic Studies.

College of Law and Islamic Studies. *See* College of Islamic Studies.

College of Law and Political Science. *See* College of Law and Politics.

College of Law and Politics—Also known as the College of Law and Political Science and College of Politics and Law, this college offered bachelor of arts degree programs in law and in political science. In 1975, it was transferred to the University of Baghdad and merged with that university's College of Law and Politics.

College of Liberal Arts. *See* College of Arts.

College of Medicine, Baghdad—Located in Yarmouk, five kilometers from central Baghdad, this college was established in 1975. In 1985-86, it had eight departments: anatomy, biochemistry, gynecology, medical biology, pediatrics, pharmacology, physiology, and public hygiene. In 1986-87, it added six additional departments: anesthesia, community medicine, general surgery, internal medicine, ophthalmology, and physiotherapy. In 1986-87, it also added an audiology and neuro-otology research center. The college utilizes 10 teaching hospitals in Baghdad (all administered by the Ministry of Health).

The College of Medicine offers the following programs:

1. A six-year Bachelor of Medicine, Bachelor of Surgery (M.B.B.S.). The curriculum is illustrated in Table 3.7.
2. Higher diploma programs in 10 clinical fields: anesthesiology, audiology, community medicine, general medicine, general surgery, gynecology and obstetrics, nuclear medicine, ophthalmology, otorhinolaryngology, and pediatrics.
3. Three- to four-year clinical training programs in general medicine, general surgery, gynecology and obstetrics, and pediatrics which lead to certification by the Arab Board of Medicine and by the Iraqi Board of Medicine (since 1986-87). Board certification programs are being planned for ophthalmology and otorhinolaryngology.
4. Master of science degree programs in 12 fields: anatomy, audiology, bacteriology, biochemistry, community medicine, embryology, medical biology, medical chemistry, medical physics, pathology, pharmacology, and physiology. The oldest master's degree program is in medical biology (since 1973). New master's degree programs are being planned in forensic medicine and radioactive medicine.
5. Doctor of philosophy (Ph.D.) degree progams in bacteriology (beginning 1988-89), pharmacology (beginning 1988-89), and physiology (beginning 1987-88).

Admission to the higher diploma and master's degree programs requires an M.B.B.S. degree plus three years of work experience in medicine. Admission to the Ph.D. degree programs requires a master's degree in the same field of study.

In 1986, it was estimated that this college had 130 faculty members (plus 200 teaching staff from the Ministry of Health in its 10 teaching hospitals), and 1,590 students (50 in graduate programs).

Table 3.7. Bachelor of Medicine, Bachelor of Surgery Curriculum, 1980-86, College of Medicine, Baghdad, University of Al-Mustansiriyah

Subject	T	P	D
First Year			
Anatomy & Embryology I	60	120	30
Arab History	60	–	–
English Language	60	30	–
Histology	60	60	30
Medical Chemistry	90	90	30
Physiology I	120	90	30
Totals	450	390	120
Second Year			
Anatomy & Embryology II	60	180	30
Development of Arabic Ideology	60	–	–
Medical Biochemistry	120	90	30
Medical Biostatistics	30	–	–
Physiology II	120	90	60
Psychology	30	–	–
Totals	420	360	120
Third Year			
Community Medicine I	60	60	–
Introduction to the Study of Arab Society & Arab Civilization	60	–	–
Medicine I	45	60	–
Microbiology	75	60	–
Parasitology	45	60	–
Pathology	90	120	–
Pharmacology	90	60	–
Surgery I	30	40	–
Totals	495	460	–
Fourth Year			
Community Medicine II	60	120	
Forensic Medicine	60	60	
History of Arab Medicine	15	–	
Medical Ethics	15	–	
Medicine II	120	100	
Obstetrics	45	40	
Pediatrics I	30	40	
Surgery II	60	80	
Totals	405	440	
Fifth Year			
Anesthesia	10	30	
Community Medicine III	60	120	
Dermatology	15	30	
Gynecology	30	–	
Medicine III	45	45	
Neurology & Psychiatry	60	60	
Ophthalmology	15	60	
Orthopedics	30	60	
Otolaryngology	15	60	
Pediatrics II	30	–	
Physiotherapy	–	60	
Radiodiagnosis & Therapy	15	30	
Surgery III	20	–	
Urology	20	30	
Totals	365	585	
Sixth Year: Clinical Rotations			
Gynecology & Obstetrics (12 weeks), Medicine (12 weeks), Pediatrics (12 weeks), Surgery (12 weeks). Total: 48 weeks.			

T = Theory, P = Practice, D = Discussion.

COLLEGE OF MEDICINE, KUFA—Located in Kufa, 200 kilometers south of Baghdad, this college was established in 1978. It utilizes the new Saddam Teaching Hospital in Kufa which is administered by the Ministry of Health. In 1985-86, this college had eight departments: anatomy, biochemistry, gynecology, medical biology, pediatrics, pharmacology, physiology, and public hygiene. In 1986-87, it added six additional departments: anesthesia, community medicine, general surgery, internal medicine, ophthalmology, and physiotherapy.

In addition to a six-year Bachelor of Medicine, Bachelor of Surgery (M.B.B.S.) degree program, this college offers two-year clinical programs leading to a

Higher Diploma in Medicine or Surgery (both since 1986-87), and two-year graduate programs leading to a Master of Science in Biochemistry, Microbiology, or Physiology (all since 1986-87). In 1987-88, it had 188 students.

COLLEGE OF MORNING STUDIES—This college served fulltime students during the years when the University of Al-Mustansiriyah catered primarily to part-time evening students. In 1970, it had 77 part-time and 5 foreign faculty members, and 1,670 students (600 men; 1,070 women). Until it was closed in 1975, it offered one-year certificate programs in economic statistics, educational statistics, library science, and science; and two-year bachelor of arts degree programs in accounting and business administration, Arabic, economics, English, and psychology. Completion of two years of university work was required for admission to the bachelor's degree programs.

COLLEGE OF POLITICS AND LAW. *See* College of Law and Politics.

COLLEGE OF RELIGION AND PHILOSOPHY. *See* College of Islamic Studies.

COLLEGE OF SCIENCE—This college has offered the following programs:

1. A one-year diploma program in weather forecasting (no longer offered) in the Department of Physics.
2. A two-year diploma program in applied geology (no longer offered).
3. Bachelor of science degree programs in biology-microbiology (since 1983-84), chemistry (since 1978-79), mathematics (since 1975-76), and physics (since 1975-76). In 1988-89, the program in biology will be expanded to include a degree program in biology-ecology.
4. Master of science degree programs in chemistry (since 1986-87), general physics (since 1975-76), meteorology (since 1986-87), microbiology (since 1987-88), and physics-astronomy (since 1986-87). A master of science degree program in mathematics is planned for 1988-89.
5. Doctor of philosophy degree programs are being planned for the future.

In earlier years, students who attended evening classes completed the bachelor of science degree programs in five years instead of four. The five-year programs are no longer offered. The former five-year curriculum in physics is illustrated in Table 3.8, the four-year curriculum in Table 3.9.

Table 3.8. Bachelor of Science Curriculum in Physics (Five-Year Evening Program), College of Science, University of Al-Mustansiriyah

Subject Hours/Week:	T	P	Subject Hours/Week:	T	P
First Year			**Fourth Year**		
Biology	2	3	Applied Mathematics	3	–
Chemistry	2	3	Atomic Physics	3	–
Mathematics I (Calculus)	4	–	Electronics	3	–
Physics (Mechanics)	3	3	Optics	3	–
Totals	11	9	Practical Physics III	–	6
			Elective*	2	–
			Totals	14	6

Subject Hours/Week:	T	P
Second Year		
Arab Society	1	–
Electricity & Magnetism	3	–
Heat & Properties of Matter & Sound	3	–
Mathematics II	3	–
Optics & Modern Physics	3	–
Practical Physics I	–	6
Totals	13	6
Third Year		
Analytical Mechanics	3	–
Applied Electricity	3	–
Mathematics III	3	–
Practical Physics II	–	6
Thermodynamics	3	–
Totals	12	6
Fifth Year		
Electromagnetic Theory	3	–
Nuclear Physics	3	–
Practical Physics IV	–	6
Quantum Mechanics	3	–
Solid State Physics	3	–
Elective*	2	–
Totals	14	6

T = Theory, P = Practice.
*Computer programming was a commonly chosen elective.

In 1970, the college had 2 fulltime, 66 part-time, and 1 foreign faculty member, and 580 students (513 men, 67 women). In 1986, it had 70 faculty members (18 in biology, 19 in chemistry, 10 in mathematics, and 23 in physics), and 1,500 students (85% women). In 1986-87, it had 10 graduate students; in 1987-88, 18. In 1988, this college was transferred to the University of Kufa.

College of Technology, Baghdad—Also known as the College of Engineering, this college was established in 1969. In 1972-73, it had 1 fulltime

Table 3.9. Bachelor of Science Curriculum in Physics (Four-Year Day Program), 1977-81, College of Science, University of Al-Mustansiriyah

	First Semester		Second Semester	
Subject Hours/Week:	T	P	T	P
First Year				
Chemistry	3	3	3	3
Electricity I	–	–	4	–
English as a Foreign Language	2	–	2	–
Geometrical Optics	4	–	–	–
Mathematics I & II	4	–	4	–
Mechanics I	5	–	–	–
National & Socialist Culture I	2	–	2	–
Physics Lab I	–	6	–	6
Properties of Matter & Wave Motion	–	–	5	–
Totals	20	9	20	9

Second Year				
Electricity II	4	–	–	–
Heat	–	–	4	–
Linear Algebra	–	–	4	–
Mathematics III	4	–	–	–
Mathematics IV: Differential Equations	–	–	4	–
Mechanics II	4	–	–	–
Modern Physics	–	–	4	–
National & Socialist Culture II	2	–	2	–
Optics	4	–	–	–
Physics Lab II	–	6	–	6
Totals	18	6	18	6
Third Year				
Advanced Mechanics	4	–	–	–
Atomic Physics	4	–	–	–
Electronics	3	3	3	3
History of Science	–	–	2	–
Mathematics V: Complex Analysis	4	–	–	–
Mathematics VI	–	–	4	–
National & Socialist Culture III	2	–	2	–
Nuclear Physics	–	–	4	–
Physics Lab III	–	6	–	6
Report Writing	1	–	2	–
Theoretical Physics	–	–	4	–
Totals	18	9	21	9
Fourth Year				
Atmospheric Physics	3	–	4	–
Electromagnetic Theory	–	–	4	–
Mathematics VII: Special Functions	4	–	–	–
National & Socialist Culture IV	–	–	1	–
Philosophy of Science	–	–	2	–
Physics Lab IV	–	6	–	6
Quantum Mechanics	4	–	–	–
Scattering Theory	4	–	–	–
Seminar	–	–	1	–
Solid State Physics	4	–	4	–
Thermal Physics	–	–	4	–
Totals	19	6	20	6

T = Theory, P = Practice.

and 44 part-time faculty members and 617 students (396 enrolled in a four-year bachelor of science program in engineering; 221 enrolled in a two-year technician diploma program in electricity or mechanics). It was merged with the College of Engineering Technology of the University of Baghdad in 1975 to form the UNIVERSITY OF TECHNOLOGY.

This college offered two-year diploma programs in engineering (civil, electrical, and mechanical) and two-year diploma of technician programs (electricity, and mechanics). It also offered two-year bachelor of science degree programs in these fields for persons who had a diploma from this college, from the Higher Institute of Industrial Engineering of the University of Baghdad, or from similar sub-bachelor's diploma programs. The two-year bachelor of science curriculum in civil engineering, offered in 1971-73, included the following courses, with units indicated in parentheses:

First Year—concrete design (3), fluid mechanics (4), mathematics (2), strength of materials (3), surveying (4), theory of structures I (2). Total: 18 units.

Second Year—foundation engineering and soil mechanics (3), highway engineering (3), irrigation, drainage, and hydrology (4), sanitary engineering (2), steel design (2), theory of structures II (2), and project (2). Total: 18 units.

COLLEGE OF THEOLOGY. *See* College of Islamic Studies.

HIGHER INSTITUTE FOR AFRICAN AND ASIAN STUDIES. *See* Institute of African and Asian Studies.

HIGHER INSTITUTE FOR NATIONAL AND SOCIALIST STUDIES. *See* Institute of Socialist and National Studies.

INSTITUTE FOR TEACHING ARABIC TO NON-NATIVE SPEAKERS. *See* Institute of Teaching Arabic to Non-Native Speakers.

INSTITUTE OF AFRICAN AND ASIAN STUDIES—Beginning with the 1986-87 academic year, this institute offers master of arts degree programs in economics, geography, geopolitics, history, international law, and political science, all on an area studies basis. A doctor of philosophy degree program in history is being planned for the academic year 1989-90. Graduates of these programs will either teach or enter diplomatic service. This institute has a library of 10,000 volumes on African and Asian affairs, plus Arab and foreign magazines.

INSTITUTE OF ARABIC FOR FOREIGN STUDENTS. *See* Institute of Teaching Arabic to Non-Native Speakers.

INSTITUTE OF LIBRARY SCIENCE—This institute is now the DEPARTMENT OF LIBRARY SCIENCE of the College of Arts.

INSTITUTE OF MODERN LANGUAGES—This institute is part of the College of Arts. It offers non-credit, adult education courses and non-credit courses for graduate students. All graduate students of the University of Al-Mustansiriyah who must pass a non-credit course in English (listening, reading, speaking, and writing) will take this course for up to six hours per week.

INSTITUTE OF NATIONAL AND SOCIALIST STUDIES. *See* Institute of Socialist and National Studies.

INSTITUTE OF SOCIALIST AND NATIONAL STUDIES—Established in 1977, this institute offers a master of arts degree program in national and socialist studies. A doctor of philosophy degree program is being planned.

INSTITUTE OF TEACHING ARABIC TO NON-ARABS. *See* Institute of Teaching Arabic to Non-Native Speakers.

INSTITUTE OF TEACHING ARABIC TO NON-NATIVE SPEAKERS—Established in 1977, this institute is administered by the College of Arts. The original purpose of its nine-month program was to prepare foreign students (most of whom come from countries in Africa and Asia) to enroll in Iraqi universities. It now also serves undergraduate students from universities in Europe (especially

Finland, Poland, and Spain) who are either enrolled in or are graduates of degree programs in those countries in Arabic language, literature, and history and who wish to improve their proficiency in Arabic.

Classes are offered from 8:30 a.m. to 1:30 p.m., Saturday through Wednesday, for a total of 25 hours per week. For persons whose employment prevents them from enrolling in the morning program, there is also an evening program that meets three hours per day, two days per week (Saturday and Tuesday, or Sunday and Wednesday), for a total of six hours per week.

The program uses Modern Standard Arabic and is divided into sections on composition, comprehension, conversation, dictation, handwriting, journalism, literature, phonetics, and related subjects. At the end of May, the same final examination is given to all students. Those who pass receive a Certificate of Completion (formerly called Certificate of Proficiency). There is no opportunity for re-examination.

During the 1984-85 academic year, 63 students were enrolled in this program, divided into six groups on the basis of proficiency. In 1985-86, there were 60 students. Most of the faculty members of this institute are graduates of the International Institute of Khartoum (Sudan), a school which specializes in teaching Arabic to non-native speakers.

The institute also offers a four-year bachelor of arts degree program in Arabic for non-native speakers, beginning with the 1987-88 academic year. Foreign persons living in Baghdad who are employed by businesses, embassies, and hospitals are also served by the institute.

UNIVERSITY OF ANBAR

The University of Anbar was established in 1988 in Ramadi (Anbar Governorate). It is also known as AL-ANBAR UNIVERSITY, ANBAR UNIVERSITY, and the UNIVERSITY OF AL-ANBAR.

UNIVERSITY OF BAGHDAD (JAMI'AT BAGHDAD)

Located in Jadiriya, a suburb of Baghdad, the University of Baghdad (also known as BAGHDAD UNIVERSITY) was established in 1956 by the union of a new college of dentistry with 11 other colleges which had been established between 1908 and 1952. These were the Colleges of Agriculture, Commerce, Engineering, Law, Literature, Medicine, Pharmacy, Science, and Veterinary Medicine, a College for Women, and the Higher Teacher Training Institute. In 1963 and 1964, branch colleges were established in Basrah (education, engineering, and law) and Mosul (agriculture and forestry, engineering, humanities, medicine, pharmacy, science, and an institute of accounting). In 1967, they became the University of Basrah and the University of Mosul, respectively.

In 1957-58, there were 5,000 students. In 1970-71, there were 20,495 students (28.0% women) and 1,633 fulltime and 645 part-time teachers. In 1975-76, there were 28,073 students (34.9% women) and 1,866 teachers. In 1985-86, there were 44,315 students (38.1% women) and 2,175 teachers. In 1975-76, 1,272 (4.5%) of the students were enrolled in graduate programs; in 1985-86, the number was 1,150 (2.5%).

For the 1984-85 academic year, 5,436 students were admitted to the first year of bachelor's degree programs. This enrollment was distributed among the individual colleges as follows: Administration and Economics, 765; Agriculture, 394; Arts, 904; Dentistry, 126; Education, 756; Education for Women, 172; Engineering, 777; Law and Politics, 370; Medicine, 156; Nursing, 88; Pharmacy, 135; Science, 603; and Veterinary Medicine, 190.

In 1977, the central library had approximately 270,000 volumes and 1,950 current periodicals. In 1986, it had 380,000 volumes. In addition, each college of the university has its own library. In 1975, a film library was established. Out-of-print periodicals are purchased on microfilm.

The University of Baghdad has had the following divisions:

Academy of Fine Arts—This academy was established in 1962 as the Higher Studies Department of the Institute of Fine Arts, Baghdad, a preparatory-level teacher training institute. During 1963-64, the department was attached to the University of Baghdad. In 1964, it became the Fine Arts Institute (also known as the Academy of Art and as the Institute of Fine Arts), an independent institution under the Ministry of Education. In 1967, it became the Academy of Fine Arts of the University of Baghdad. It has also been known as the College of Fine Arts.

This academy offers bachelor of arts degree programs in dramatic arts (acting and directing, cinema, radio and television, and teacher training), and plastic arts (industrial design and decoration, painting, pottery, sculpture, theoretical studies, and teacher training). In previous years it also offered higher diploma programs in dramatic arts, painting, and sculpture.

Graduates are generally employed as artists or in the communications media. Some become teachers in intermediate schools, preparatory schools, and primary teacher training institutes.

In 1965-66, there were 110 students and 23 teachers. In 1970-71, there were 449 students (20.9% women) and 56 teachers. In 1975-76, there were 755 students (29.5% women) and 62 teachers; in 1978-79, there were 891 students and 54 teachers. The number of volumes totalled 9,250 in 1975-76, 10,000 volumes in 1978-79.

Administration and Economics Research Center. *See* Center for Economic and Administrative Research.

Administration Institute. *See* Institute of Administration.

Al-Tahreer College. *See* College for Women.

Arab-Scientific Research Center—Also known as Arab Scientific Heritage Research Center. No academic programs.

Baghdad Institute of Technology. *See* Technology Institute.

Center for Economic and Administrative Research—Also known as Administration and Economics Research Center. No academic programs.

Center for Educational and Psychological Research. *See* Center of Psychological and Educational Research.

CENTER FOR MEDICAL RESEARCH—Also known as MEDICAL RESEARCH CENTER. No academic programs.

CENTER FOR PALESTINIAN STUDIES RESEARCH—Also known as RESEARCH CENTER FOR PALESTINIAN STUDIES. No academic programs.

CENTER FOR THE REVIVAL OF ARAB SCIENTIFIC HERITAGE—No academic programs.

CENTER OF NATURAL HISTORY RESEARCH—No academic programs.

CENTER OF PSYCHIATRY—No academic programs.

CENTER OF PSYCHOLOGICAL AND EDUCATIONAL RESEARCH—Also known as CENTER FOR EDUCATIONAL AND PSYCHOLOGICAL RESEARCH. No academic programs.

CENTER OF PSYCHOLOGICAL HEALTH CARE—Also known as CENTER OF PSYCHOLOGY AND HYGIENE. No academic programs.

CENTER OF PSYCHOLOGY AND HYGIENE. *See* Center of Psychological Health Care.

CENTER OF REGIONAL AND URBAN PLANNING. *See* College of Urban and Regional Affairs.

CENTER OF URBAN AND REGIONAL PLANNING. *See* College of Urban and Regional Affairs.

COLLEGE FOR WOMEN—This college was established in 1946 as QUEEN ALIYAH COLLEGE. It offered a two-year preparatory school program and a post-preparatory school program to train intermediate school and preparatory school teachers. In 1951, a program in art was added. In 1954, 349 students were enrolled in this college.

Queen Aliyah College was one of 12 colleges which formed the University of Baghdad in 1956. A home economics program was added in 1958, and the college was renamed AL-TAHREER COLLEGE. It was later renamed the COLLEGE FOR WOMEN. The college was also known as the COLLEGE OF EDUCATION FOR WOMEN, COLLEGE OF WOMEN, and WOMEN'S COLLEGE.

The college offered programs of study in education (with majors in home economics and secretarial science), social work, and other special fields for women. Its education graduates taught in intermediate and secondary schools for girls. In 1964, it had 81 faculty members and 1,205 students.

In 1969, this college was closed. Some of its programs were transferred to the College of Arts. Other programs were transferred to a new Home Arts Institute, now known as the Institute of Applied Arts, Baghdad. In 1984, this college was re-established as the COLLEGE OF EDUCATION FOR WOMEN of the University of Baghdad.

COLLEGE OF ADMINISTRATION AND ECONOMICS—In 1936, the College of Law set up an INSTITUTE OF FINANCIAL SCIENCES to offer a two-year program of study in commerce and economics. This program was later expanded to four years and led to a Bachelor of Commerce. In 1947, the Institute of Financial Sciences was reorganized and renamed the COLLEGE OF COMMERCE. It was later renamed the COLLEGE OF COMMERCE AND ECONOMICS. It was one of 12 colleges which formed the University of Baghdad in 1956.

In 1963, the College of Commerce and Economics was divided into a College of Commerce, a College of Economics and Politics (also called College of Political Science and Economics), and a College of General Administration (also known as Institute of Administration). The College of Commerce was then merged with the Higher Institute of Accountancy in Baghdad to form the COLLEGE OF COMMERCE AND ACCOUNTANCY.

In 1969, the College of Commerce and Accountancy was merged with the College of General Administration, the economics section of the College of Economics and Politics, and the business administration program of Al-Hikma University of Baghdad to form the College of Administration and Economics. At the same time, the politics section of the College of Economics and Politics was merged with the College of Law to form the College of Law and Politics.

The College of Administration and Economics has offered the following programs:

1. A three-year diploma program in accounting (no longer offered).
2. Bachelor of arts degree programs in administration (accounting, business administration, commercial teaching, general administration, public administration, or tourism), economics, and statistics. The bachelor of arts degree program in general administration is illustrated in Table 3.10. The program in economics is illustrated in Table 3.11.
3. One-year to two-year higher diploma programs (terminated in the 1980s) in account superintending, auditing, book management, cost accounting, finance, and insurance administration. The curriculum in cost accounting is illustrated in Table 3.12.
4. Master of arts degree programs. The curriculum for the master's degree program in business administration is illustrated in Table 3.13.
5. A doctor of philosophy degree program in economics.

Table 3.10. Bachelor of Arts Curriculum in General Administration, 1972-76, College of Administration and Economics, University of Baghdad

Subject	Hours/ Week	Subject	Hours/ Week
First Year		**Third Year**	
Basic Concepts in Administration, Economics & Statistics	3	Commercial Law	3
Differential & Integral Calculus	3	Corporate Accounting	4
Elementary Accounting	3	Cost Accounting	3
Introduction to Statistics	3	Local Administration	3
Principles of Administration	3	Organization Theory	3
Principles of Economics I	3	Production Management	3
Sociology	2	Public Finance	2
Total	20	Public Relations	2
		Stores Management & Inventory Control	2
		Total	25

Second Year		**Fourth Year**	
Financial Mathematics	2	Auditing	3
General Mathematics	3	Banking Management	2
Governmental Management	2	Civil Service Application	2
Intermediate Accounting	5	Comparative Public Admininistration	2
Marketing Management	5	Economics of the Arab Countries	2
Methods of Research	2	Financial Management	3
Personnel Administration & Human Relations	3	Insurance	2
Principles of Economics II	3	Managerial Accounting	3
Statistics	3	Specialized & Governmental Accounting	4
Total	28	Theories of Administrative Development	2
		Total	25

Table 3.11. Bachelor of Arts Curriculum in Economics, 1973-77, College of Administration and Economics, University of Baghdad

Subject	Hours/ Week	Subject	Hours/ Week
First Year		**Third Year** *(continued)*	
Elementary Accounting	4	Economic Statistics	2
General Mathematics	4	Economic Theory	3
Introduction to Statistics	3	Economics of Public Finance	3
Principles of Administration	3	History of Economic Doctrines	3
Principles of Economics	3	Industrial Economy	3
Sociology	2	Mathematical Economics	2
Total	19	National Income & Employment	3
Second Year		Total	25
Economic Geography	2	**Fourth Year**	
Economic History	3	Agricultural Policy	3
Economics	3	Comparative Economic Systems	3
Labor Economics	3	Economic Planning	3
Mathematics	3	Economics of Arab Countries	3
Political Science	2	International Economic Relations	3
Statistics	3	Money & Banking	3
Total	19	Petroleum Economics	3
Third Year		Socialist Economics	3
Agricultural Economy	3	Total	24
Economic Development	3		

Table 3.12. Higher Diploma Curriculum in Cost Accounting, 1974–76, College of Administration and Economics, University of Baghdad

Subject	Semester:	Hours per Week 1	2	3
Accounting Systems		–	3	–
Cost Accounting		4	5	4
Financial Accounting		3	3	–
Managerial Accounting		–	–	3
Production Management		3	3	–
Seminar		–	–	2
Statistics		2	–	–
Thesis (third semester)		–	–	–
Totals		12	14	9

Table 3.13. Master of Arts Curriculum in Business Administration, 1976-78, College of Administration and Economics, University of Baghdad

Subject	Semester:	Hours per Week 1	2
First Year			
Financial Accounting		3	–
Financial Management		3	2
Marketing		–	3
Organizing		–	3
Personnel Management		–	3
Research Methods		2	–
Statistics		2	–
Totals		10	11
Second Year			
Computing		–	2
International Marketing		2	–
Operations Research		–	2
Organizing		2	–
Personnel Management		2	–
Production Management		3	–
Stores Management		–	2
Thesis (second semester)		–	–
Totals		9	6

This college is one of the larger divisions of the university. In 1948-49, there were 369 students (2.7% women) and 17 teachers. In 1954-55, there were 1,164 students. In 1970-71, there were 2,020 students (26.5% women) and 92 teachers. In 1975-76, there were 4,426 students (40.8% women) and 97 teachers. In 1978-79, there were 4,956 students and 123 teachers. In 1975-76, 241 (5.4%) of the students were enrolled in graduate programs, compared to 281 (5.6%) in 1978-79. There were 37,000 volumes in 1975-76, and 43,800 in 1978-79.

COLLEGE OF AGRICULTURE, ABU-GHRAIB—Established in Abu-Ghraib (10 miles west of Baghdad) in 1950 as the HIGHER AGRICULTURE INSTITUTE, the institute offered two-year post-preparatory programs. In 1952, the institute was converted to a College of Agriculture, and the programs were expanded to four years, leading to a bachelor of science degree. The college was one of 12 colleges which formed the University of Baghdad in 1956. It now offers the following programs:

1. Bachelor of science degree programs in agricultural education, agricultural mechanization (beginning 1987-88), animal production, farm management and cooperatives, field crops, food technology, horticulture, plant protection, and soil science.
2. Master of science degree programs in agricultural education, animal breeding, animal production, farm management and cooperatives, field crops, food technology, horticulture, plant pathology, plant protection, and soil science.
3. Doctor of philosophy degree programs in agricultural education and plant protection.

In 1954-55, there were 52 students. In 1964-65, there were 488 students and 99 teachers. In 1970-71, there were 876 students (6.9% women) and 98 teachers. In 1975-76, there were 1,901 students (18.5% women) and 269 teachers, compared with 2,674 students and 181 teachers in 1978-79. During the 1975-76 academic year, 85 (4.4%) of the students were enrolled in graduate programs, compared to 149 (5.5%) in 1978-79. For the 1987-88 academic year, 86 students were admitted to the master's degree programs, and 6 students were admitted to the doctoral programs. There were 25,700 volumes in 1975-76, and 28,100 in 1978-79.

COLLEGE OF AGRICULTURE, MOSUL. *See* College of Agriculture and Forestry, University of Mosul.

COLLEGE OF AL-SHARI'A—This college was established in Karkh, suburban Baghdad (Baghdad Governorate) by the Ministry of Awqaf and Religious Affairs as the RELIGIOUS COLLEGE, an independent college. In 1921, it was renamed the COLLEGE OF AL-SHARI'A. In the late 1950s, it became a department within the College of Arts of the University of Baghdad. In the early 1960s, it became a separate college of the university. It has also been known as the COLLEGE OF ALSHAREA, COLLEGE OF ISLAMIC LAW AND CULTURE, COLLEGE OF ISLAMIC STUDIES, and COLLEGE OF THEOLOGICAL STUDIES.

In 1964-65, there were 893 students and 30 teachers; in 1970-71, there were 140 students and 20 teachers. In 1978-79, student enrollment was 519 with 21 teachers; in 1982-83, student enrollment was 516 with 34 teachers.

This college offers a bachelor of arts degree program in Islamic jurisprudence. It formerly offered a bachelor of arts degree program in Arabic literature and Islamic studies. In the 1980s, it absorbed Al-Imam Al-A'dham College.

College of Arts, Baghdad—This college was established in 1949 as the College of Literature, one of the 12 colleges which formed the University of Baghdad in 1956. In 1968, it was merged with the College of Education and the Institute of Languages to form the College of Arts and Literature. In 1971, the education section became a separate College of Education again, and the rest of the college was renamed the College of Arts. It has also been known as the College of Humanities, and Literary College.

The College of Arts has offered the following programs:

1. A higher diploma program in library science. It required one full calendar year: two semesters of coursework, a research paper, and two months of practical training. Admission required a bachelor's degree in another field, preferably academic rather than technical. This program, which enrolled 28 students in 1975, was transferred to the University of Al-Mustansiriyah in 1977.
2. Bachelor of arts degree programs in antiquities (archaeology), Arabic, education, English (since 1949), French, geography, German, Hebrew, history, journalism, Kurdish, Persian, philosophy, psychology, religion (Islamic studies), Russian, social work, sociology, Spanish, and Turkish.

   In 1987, the bachelor's degree programs in French, German, Persian, Russian, Spanish, and Turkish were transferred to a new College of Languages. The College of Arts retained the degree programs in Arabic, English, Hebrew, and Kurdish.
3. A one-year higher diploma program in education, offered by the Department of Education and Psychology to graduates of colleges other than a college of education. This program prepares teachers in specific fields for intermediate and preparatory schools.
4. Master of arts degree programs in archaeology, Arabic, English language and linguistics, English literature, geography, philosophy, and sociology.
5. Doctor of philosophy degree programs in Arabic, geography, and history.

The Department of English has a library of 20,000 volumes of literary criticism, novels, plays, short stories, and references. Graduates of the bachelor's degree program teach English in intermediate and preparatory schools or serve as translators in governmental offices.

In 1964-65, there were 1,843 students and 77 teachers. In 1975-76, there were 3,715 students (46.7% women) and 360 teachers. In 1978-79, there were 3,775 students and 292 teachers. In 1975-76, 155 (4.1%) of the students were enrolled in graduate programs, compared to 134 (3.5%) in 1978-79. There were 145,700 volumes in 1975-76, and 211,600 in 1978-79.

College of Arts, Basrah. *See* College of Arts, University of Basrah.

College of Arts, Mosul. *See* College of Arts, University of Mosul.

College of Arts and Literature. *See* College of Arts.

College of Commerce. *See* College of Administration and Economics.

College of Commerce and Accountancy. *See* College of Administration and Economics.

College of Commerce and Economics. *See* College of Administration and Economics.

College of Dentistry—Established in 1953 as part of the College of Medicine, the College of Dentistry became a separate college in 1956. The college was one of the 12 colleges which formed the University of Baghdad that year. It offers a five-year program leading to a Bachelor of Dental Surgery (B.D.S.) degree and, since 1986-87, master of science degrees in various fields related to dentistry (e.g., oral surgery).

In earlier years, the college also offered graduate programs leading to a higher diploma. The Bachelor of Dental Surgery curriculum for 1973-78 is illustrated in Table 3.14; that for 1978-83 is illustrated in Table 3.15. A new curriculum was introduced in 1983.

Admission to the bachelor's degree program requires a grade of at least 70% in biology, chemistry, and physics on the preparatory baccalaureate examination, scientific section. Admission to the master's degree programs requires a grade average of at least 70% in the bachelor's degree program.

Table 3.14. Bachelor of Dental Surgery Curriculum, 1973-78, College of Dentistry, University of Baghdad

Subject	Lec/Lab	
First Year		
Biology	3	4
Chemistry	3	4
Dental Anatomy I	1	3
Dental Materials	1	3
Physics	3	4
Totals	11	18
Second Year		
Biochemistry	1	3
Dental Anatomy II	2	6
Histology	1	3
Oral Histology	2	–
Physiology	2	3
Prosthetics I	2	5
Totals	10	20
Third Year		
Bacteriology	1	2
Conservation I	2	6
Crown & Bridge I	1	3
Pathology	1	3
Pharmacology	2	3
Preventive Dentistry	1	3
Prosthetics I	2	4
Totals	10	24
Fourth Year		
Conservation II	–	2
Crown & Bridge II	1	4
General Medicine	2	–
General Surgery	1	–
Oral Pathology	1	2
Oral Surgery I	1	9
Orthodontics I	1	4
Periodontology	2	2
Prosthetics II	2	5
Radiology	1	–
Totals	12	28
Fifth Year		
Conservation III	1	12
Oral Surgery II	2	12
Orthodontics II	1	4
Prosthetics III	1	12
Totals	5	40

Lec = Lecture, Lab = Laboratory.

Table 3.15. Bachelor of Dental Surgery Curriculum, 1978-83, College of Dentistry, University of Baghdad

Subject Hours/Week:	Lec/Lab		Lec/Lab	
First Year	First Semester		Second Semester	
Anatomy	–	–	3	5
Arab Society	2	–	2	–
Biochemistry	1	–	2	4
Chemistry	2	4	1	–
Dental Anatomy & Tooth Carving	–	–	–	3
Histology	1	2	2	2
Medical Biology	4	4	–	–
Medical Physics	3	6	–	–
Physiology	–	–	4	3
Totals	13	16	14	17
Second Year				
Arab Society	1	–	1	–
Bacteriology	1	2	2	2
Dental Materials	1	2	–	–
Oral Histology	2	3	–	–
Oral Pathology	–	–	1	2
Pathology	1	2	1	2
Prosthodontics	1	6	1	6
Restorative Dentistry	2	9	2	9
Totals	9	24	8	21
Third Year				
Community Medicine & Biostatistics	1	–	1	3
Exodontia, Anesthesia, & Radiology	2	3	2	3
General Medicine	1	1	1	1
General Surgery	1	1	1	1
Oral Pathology	1	2	1	2
Periodontics	–	–	1	–
Pharmacology	2	1	1	1*
Prosthodontics	1	6	1	6
Restorative Dentistry	1	4	1	4
Totals	10	18	10	21
Fourth Year				
Arab Society	1	–	1	–
Oral Surgery	1	6	1	6
Orthodontics	–	2	1	2
Pedodontics	1	–	1	3
Periodontics	1	3	1	3
Preventive Dentistry	1	–	1	–
Prosthodontics	1	6	1	6
Restorative Dentistry	1	6	1	6
Totals	7	23	8	26

Fifth Year				
Arab Society	1	–	1	–
Oral Medicine	1	3	–	3
Oral Surgery	1	3	–	3
Orthodontics	1	2	–	2
Pedodontics & Preventive Dentistry	–	4	–	4
Periodontics	–	3	–	3
Prosthodontics	1	6	–	6
Restorative Dentistry	1	6	–	6
Totals	6	27	1	27

Lec = Lecture, Lab = Laboratory.
*Plus 15 hours of seminar during the year.

In 1964-65, there were 215 students and 14 teachers. In 1970-71, there were 440 students (27.9% women) and 47 teachers. In 1975-76, there were 750 students (47.3% women) and 63 teachers; in 1978-79, those numbers had declined to 687 and 40, respectively. In 1975-76, 13 (1.7%) of the students were enrolled in graduate programs compared to 8 (1.1%) in 1978-79. There were 4,700 volumes in 1975-76 and 7,501 in 1978-79.

COLLEGE OF ECONOMICS AND POLITICAL SCIENCE. *See* College of Administration and Economics.

COLLEGE OF EDUCATION, BAGHDAD—This college was established in 1923 as a series of in-service evening courses for primary school teachers. In 1927, the program was reorganized into the HIGHER TEACHERS TRAINING INSTITUTE, also known as the HIGHER INSTITUTE OF TEACHERS, HIGHER INSTITUTE OF TEACHER TRAINING, HIGHER TEACHERS COLLEGE, HIGHER TEACHERS TRAINING COLLEGE, TEACHER TRAINING COLLEGE, and TEACHER TRAINING INSTITUTE. Women were first admitted in 1937. The institute was one of the 12 colleges which formed the University of Baghdad in 1956. It was renamed the College of Education in 1958.

In 1968, this college was merged with the College of Literature and the Institute of Languages to form the new COLLEGE OF ARTS AND LITERATURE. The education section became a separate College of Education again in 1971. At that time, it offered a one-year program of study leading to a Higher Diploma in Education, with specialization in methods of teaching agriculture, Arabic, English, industrial arts, mathematics, science, or social studies. Admission required a bachelor's degree in another field. The higher diploma curriculum, offered in 1971-72, included the following courses, with hours in parentheses:

First Term—adolescent psychology (3), curriculum and materials (2), educational psychology (4), methods of teaching [name of major field] (4), and philosophy of education (4). Total: 17 hours.

Second Term—foundation of practice teaching (observation) (8), problems of teaching (2), school and society (3), seminar (2), and tests and measurements (2). Total: 17 hours.

Third Term—practice teaching (17). Total: 17 hours.

In 1974, the College of Education was reorganized. Since then, it has admitted preparatory school graduates to four-year bachelor's degree programs.

This college now offers the following degree programs:

1. Bachelor of arts degree programs in Arabic, educational psychology, English, geography, history, and Kurdish; and bachelor of science degree programs in biology, chemistry, computer science (beginning 1987-88), home economics, mathematics, and physics. Effective with the 1984-85 academic year, the program in home economics was transferred to the College of Education for Women.

   All bachelor's degree programs include a minor in education and six weeks of practice teaching. The programs are divided into an academic major (50%), education minor (25%), and cultural education (25%). Each program includes courses in applied methods of teaching, educational psychology (adult education [since 1986-87], child and adolescent psychology, counseling and guidance, and tests and measurement), English, history and philosophy of education, methods of research, and statistics.
2. Master of arts or master of science degree programs in all of the subjects which are offered at the bachelor's degree level. The first master's degree program was introduced in 1963-64. A master of arts degree program in curriculum and methods of teaching was formerly offered.
3. Doctor of philosophy degree programs in educational psychology and philosophy of education. The first doctoral degree was awarded in 1980.

In 1954-55, there were 736 students. In 1964-65, there were 2,604 students and 171 teachers. In 1975-76, there were 4,699 students (34.7% women) and 147 teachers. In 1978-79, there were 5,249 students and 315 teachers. In 1986-87, student enrollment reached 8,000. In 1975-76, 35 (0.7%) of the students were enrolled in graduate programs, compared to 38 (0.7%) in 1978-79. There were 32,500 volumes in 1975-76 and 24,650 volumes in 1978-79.

Graduates of this college teach in intermediate schools, preparatory schools, vocational schools, and primary teacher training institutes.

COLLEGE OF EDUCATION, BASRAH. *See* College of Education, University of Basrah.

COLLEGE OF EDUCATION, MOSUL. *See* College of Education, University of Mosul.

COLLEGE OF EDUCATION FOR WOMEN—Established in 1984 to serve women from conservative Moslem families, this college replaced a previous COLLEGE FOR WOMEN that had been closed in 1969. It offers bachelor's degree programs in education with majors in Arabic, biology, chemistry, English, geography, history, home economics, kindergarten education (beginning 1987-88), mathematics, physical education, and physics. Master of arts degree programs are being planned in English and in kindergarten education.

The bachelor's degree program in home economics was transferred from the College of Education (effective 1984-85). The first students in this program were transfer students; they graduated in 1986. The first students will graduate from the kindergarten education program in 1991 and from the other bachelor's degree programs in 1988. Graduates teach in kindergartens and in intermediate schools and preparatory schools for girls.

The college enrolled 172 students in 1984-85. At that time, it had 30 faculty members (9 men, 21 women) and 18 technicians. It admitted 300 new students in 1985-86, and another 700 in 1986-87.

COLLEGE OF ENGINEERING, BAGHDAD—This college was established in 1921 as a technical training school. It was upgraded to university level in 1942. In 1956, it was one of 12 colleges which formed the University of Baghdad. In 1985, the college moved to the University of Baghdad's central campus.

In 1987, the college had an HP 9845 computer, 212 IBM-compatible personal computers, and a contract with the Nippon Electronic Corporation for a NEC computer to be delivered in the near future. For administrative offices, it had 10 IBM-compatible Olivetti PCs.

Competition for admission to the College of Engineering results in highly selective admissions standards. In 1976, new students needed a grade of 503 or higher (out of 600) on the preparatory baccalaureate, scientific section, including grades of 70 or higher in mathematics and physics. For architectural engineering, students needed a grade of 546 or higher. In 1986, students in all fields needed a grade of 491 or higher; for architectural engineering, students needed a grade of 557 or higher.

During the academic year 1963-64, the College of Engineering used the following grading scale: 90-100 excellent, 80-89 very good, 70-79 good, 60-69 pass, 40-59 poor, 0-39 very poor. The minimum grade required to pass each subject was 60, but the minimum average required to pass each year was 65. During the academic years 1964-65 through 1967-68, this college used the following grading scale: 90-100 excellent, 80-89 very good, 65-79 good, 50-64 pass, 40-49 poor, and 0-39 very poor. The minimum grade to pass each subject was 50, but the minimum average required to pass each year was 55. During the academic year 1977-78 only, the grade ranges 50-64 pass and 65-79 good were replaced by three ranges: 70-79 good, 60-69 fair (also translated as medium or average), and 50-59 pass. This college now uses the standard Iraqi grading scale. (See chapter I, section L for detailed information.)

Grading in the College of Engineering is very strict, particularly during the first two years. No more than 5% of the students get grades of excellent (90-100). Grades of 60-70 are considered to represent very good achievement. The failure rate is 20% in civil and mechanical engineering during the first and second years; and 40%-45% during the first and second years in architectural, chemical, and electrical engineering, and during the third year in architectural engineering. In the fourth and fifth years in architecture, 20%-25% fail the examinations on the first attempt.

The College of Engineering has offered the following programs:

1. Bachelor of science degree programs in eight fields of engineering: agricultural mechanics, chemical, civil, electrical (with options in electronics and power), electronics and communications, mechanical (with an option in mechanics and textile engineering), oil and minerals (also known as oil and metals and as petroleum and mining), and surveying. In 1986, the programs in agricultural mechanics engineering (formerly known as irrigation and agricultural machinery) and mechanics and textile engineering were trans-

ferred to the new College of Engineering of the University of Al-Mustansiriyah.

2. A five-year bachelor of science degree program in architectural engineering. By U.S. criteria, this is a program in *architecture*, not *architectural engineering*.
3. A five-year bachelor of science degree program in nuclear engineering, since 1982-83; the first students graduated in 1987. The first year involves general studies. For the next two years, each student can choose to follow the chemical engineering, electrical engineering, or mechanical engineering curriculum, or the systems and control engineering curriculum of the University of Technology. During the last two years, students specialize in nuclear engineering.
4. A two-year bachelor of science degree program in systems analysis (terminated prior to 1976) for graduates of the departments of mathematics and physics of the College of Science. Only one group of students completed this program.
5. A one-year higher diploma program in applied architecture, with a specialization in administrative buildings, hospitals, theaters, etc. (terminated in 1981). Admission was based upon a Bachelor of Architecture and at least two years of employment experience in architecture. Approximately 10% of the graduates of this program (those with a grade average of 80% or higher) were admitted to the master's degree program in architecture.
6. Higher diploma programs in agricultural mechanics, civil, electrical, and mechanical engineering (terminated in the early 1980s).
7. Two-year master of science degree programs in architectural (since 1976), chemical, civil, electrical, mechanical, and oil and minerals engineering. A total of 30 credits is required: 24 in coursework, 6 for the thesis. A master's degree program in agricultural mechanics (also known as irrigation and agricultural machinery engineering) was terminated in 1986.
8. A one-year master of science degree program in nuclear engineering, since 1987-88. Admission requires a bachelor of science degree in nuclear engineering. This is currently the only master's degree program in Iraq which does not require two years of study.
9. Doctor of philosophy degree programs in six fields of engineering: architectural (beginning in 1987), chemical, civil, electrical, irrigation, and oil and minerals (beginning in 1986). The program in civil engineering was offered for a brief period of time in the mid-1970s; it was re-established in 1986.

Engineering students cover the same computer science topics which are studied by all other students, plus topics related to engineering. In the first year of each bachelor's degree program, students take analytical geometry, calculus, descriptive geometry, and differential equations. Beginning with the 1986-87 academic year, research methods replaced English as a required course. Each student has access to a personal computer for the laboratory portion of computer science courses (since 1986-87, required for each of the first two years). Computer programs are available in both Arabic and English.

Electrical engineering students may specialize in computer science, but there is no separate major in this field at the present time. A degree program in computer hardware engineering is being planned. The Department of Electrical Engineering offers special short-term courses in computer science for advanced undergraduate students in other fields and for some graduate degree programs.

In 1975-76, there were 3,494 students (17.4% women) and 124 teachers. In 1985-86, there were 4,000 students (10.0% women) and 200 teachers. In 1975-76, 47 (1.3%) of the students were enrolled in graduate programs; in 1978-79, 200 (5.0%) were enrolled, mostly at the master's level. In 1975-76, there were 35,000 volumes; in 1985-86, there were 60,000 volumes.

COLLEGE OF ENGINEERING, BASRAH. *See* College of Engineering, University of Basrah.

COLLEGE OF ENGINEERING, MOSUL. *See* College of Engineering, University of Mosul.

COLLEGE OF ENGINEERING TECHNOLOGY—This college was established in November 1960 as the HIGHER TECHNICAL INSTITUTE, an independent tertiary-level institution also known as the HIGH TECHNICAL INSTITUTE, HIGHER INDUSTRIAL INSTITUTE, and INSTITUTE OF TECHNOLOGY. In 1967, the name was changed to the COLLEGE OF INDUSTRIAL ENGINEERING. In 1969, it merged with the Engineering Science Department of Al-Hikma University of Baghdad and became the COLLEGE OF INDUSTRIAL ENGINEERING of the University of Baghdad. In 1970, the name was changed to the College of Engineering Technology (also translated as the COLLEGE OF TECHNOLOGY ENGINEERING). In 1975, the College of Engineering Technology was merged with the College of Technology of the University of Al-Mustansiriyah to become the UNIVERSITY OF TECHNOLOGY.

While it was the Higher Technical Institute and later the College of Engineering Technology of the University of Baghdad, this college offered five-year bachelor of science degree programs in automotive engineering technology, building and construction technology, electrical engineering technology, and mechanical engineering technology.

In 1970, the College of Engineering Technology had 42 fulltime and 32 part-time faculty members, and 756 students (747 men, 9 women). In 1972, it had 53 fulltime and 14 part-time faculty members and 924 students.

COLLEGE OF FINE ARTS. *See* Academy of Fine Arts.

COLLEGE OF GENERAL ADMINISTRATION. *See* Institute of Administration and Economics.

COLLEGE OF HUMANITIES, BAGHDAD. *See* College of Arts, University of Baghdad.

COLLEGE OF HUMANITIES, MOSUL. *See* College of Arts, University of Mosul.

COLLEGE OF INDUSTRIAL ENGINEERING. *See* College of Engineering Technology.

COLLEGE OF ISLAMIC LAW AND CULTURE. *See* College of Al-Shari'a.

COLLEGE OF ISLAMIC STUDIES. *See* College of Al-Shari'a.

COLLEGE OF LANGUAGES—This college was established in 1987. The bachelor of arts degree programs in French, German, Persian, Russian, Spanish, and Turkish were transferred to it from the College of Arts, and a new bachelor of arts degree program in English was added. The College of Arts retained its bachelor's degree programs in Arabic, English, Hebrew, and Kurdish. (See also Institute of Languages.)

College of Law—This college was established in 1987 by a reorganization of the College of Law and Politics into two separate colleges. It offers bachelor of arts, master of arts and doctor of philosophy degree programs in law. (See also College of Law and Politics.)

College of Law and Economics, Basrah. *See* College of Law and Economics, University of Basrah.

College of Law and Political Science. *See* College of Law and Politics.

College of Law and Politics—This college was established in 1908 by the Ministry of Justice as the College of Law. It was closed in 1914 and reopened in 1920. It was one of 12 colleges which formed the University of Baghdad in 1956. In 1969, a program in political science was added, and the college's name was changed to the College of Law and Politics (also known as the College of Law and Political Science). In 1975, this college absorbed the College of Law and Politics of the University of Al-Mustansiriyah. In 1987, the college was reorganized into a separate College of Law and College of Politics.

This college offered programs of study leading to the degrees of Bachelor of Arts in Political Science, Bachelor of Law, Master of Arts in Political Science, Master of Law, and Doctor of Philosophy in Law. Until 1947, it also offered a two-year program of study in commerce and economics.

In 1954-55, there were 1,324 students. In 1964-65, there were 1,905 students and 26 teachers. In 1970-71, there were 847 students (21.9% women) and 75 teachers. In 1975-76, there were 1,464 students (32.9% women) and 77 teachers. In 1978-79, there were 4,151 students and 87 teachers. In 1975-76, 103 (7.0%) of the students were enrolled in graduate programs, compared to 148 (3.5%) in 1978-79. In 1975-76, there were 30,000 volumes; in 1978-79, there were 43,500 volumes.

College of Literature. *See* College of Arts.

College of Medicine, Baghdad—Established in 1927 as the Royal College of Medicine, this was one of 12 colleges which formed the University of Baghdad in 1956. Three of its former divisions (College of Pharmacy [1936], School for Health Officials [1932], and School of Nursing [1933]) eventually became separate institutions. The College of Medicine utilizes the Ministry of Health's teaching hospital in Medical City, a modern medical complex in Baghdad which was completed in 1969.

The College of Medicine offers the following programs:

1. A six-year Bachelor of Medicine, Bachelor of Surgery (M.B.B.S.) degree program. Admission requires a grade of at least 70% in biology, chemistry, and physics on the preparatory baccalaureate examination, scientific section. The curriculum for this program for 1978-84 was also used by the colleges of medicine of the Universities of Basrah and Mosul and is illustrated in Table 3.16.
2. One-year higher diploma programs in anesthesiology, forensic medicine, gynecology and obstetrics, internal medicine, otorhinolaryngology, pediatrics, pharmacology, physiology, public health, radiology, and surgery.
3. A two-year higher diploma program in clinical pathology.

Table 3.16. Bachelor of Medicine, Bachelor of Surgery Curriculum, College of Medicine, 1978-84, Universities of Baghdad, Basrah, and Mosul

Subject	T	P	D
First Year*			
Anatomy	30	60	–
Medical Biology	90	90	30
Medical Chemistry	90	90	30
Medical Physics	60	90	30
Totals	270	330	90
Second Year			
Anatomy	60	240	–
Embryology	20	30	15
Histology	40	30	15
Medical Biochemistry	120	90	30
Physiology	150	90	30
Totals	390	480	90
Third Year			
Community Medicine	30	30	–
History of Arab Medicine	15	–	–
Medical Ethics	15	–	–
Medicine	45	60	–
Microbiology	75	60	–
Parasitology	45	60	–
Pathology	90	120	30
Pharmacology	90	60	–
Surgery (General)	30	–	–
Totals	435	390	30
Fourth Year†			
Community Medicine	90	120	–
Forensic Medicine	60	60	–
Gynecology & Obstetrics	60	80	–
Medicine	120	80	–
Pediatrics (Normal)	15	–	–
Surgery (Regional)	90	80	–
Totals	435	420	–
Fifth Year			
Dermatology & Venereal Diseases	30	36	–
Gynecology & Obstetrics	30	48	30
Medicine	75	48	–
Neurology	30	24	–
Ophthalmology	20	36	–
Orthopedics	45	24	–
Otolaryngology	20	36	–
Pediatrics	45	48	15
Psychiatry	30	24	–
Surgery (Regional)	50‡	48	–
Totals	375	372	45

Sixth Year: Clinical Rotations

Anesthesia (1 week), Cardiac Surgery (1 week), General Surgery (8 weeks), Gynecology & Obstetrics (8 weeks), Infectious Diseases (2 weeks), Medicine (12 weeks), Neurology & Psychiatry (2 weeks), Orthopedics & Emergency (4 weeks), Pediatrics (6 weeks), Radiology (2 weeks), Urology (2 weeks).

Total: 48 weeks

T = Theory, P = Practice, D = Discussion (all hours per year).

*The first year also includes classes in Arab Society and English Language.

†Four weeks of summer training in Community Medicine after the fourth year.

‡Anesthesia (8), Neurosurgery (7), Plastic Surgery (5), and Radiology and Radioisotopes (30).

4. Two-year master of science degree programs, beginning in 1986-87, in anatomy, microbiology, orthopedic surgery, pharmacology, physiology, public health, and urology.

5. Clinical programs leading to professional certification by the Arab Medical Board, the Iraqi Medical Board, or by one of three boards in England: College of Gynecology, Royal College of Physicians, and Royal College of Surgeons.

Admission to the higher diploma, master's degree, and board certification programs requires an M.B.B.S. degree with a grade average of at least 70%, plus at least three years of employment experience in medicine.

In 1954-55, 422 students were enrolled. In 1964-65, there were 1,420 students and 62 teachers. In 1975-76, there were 1,998 students (24.4% women) and 192 teachers. In 1978-79, there were 2,038 students and 194 teachers. In 1975-76, 239 (11.9%) of the students were enrolled in graduate programs, compared to 214 (10.5%) in 1978-79. There were 32,000 volumes in 1975-76, and 38,750 in 1978-79.

College of Medicine, Mosul. *See* College of Medicine, University of Mosul.

College of Nursing—Established by the Ministry of Health in 1933 as the School of Nursing, part of the College of Medicine, this college became a separate institution in 1962. In 1964, it became part of the University of Baghdad. It has also been known as the College of Nursing and Midwifery.

Table 3.17. Bachelor of Science in Nursing Curricula, 1964-68 and 1970-74, College of Nursing, University of Baghdad

Subject	Credits	Credits
	1964-68	1970-74
First Year		
Anatomy	4	6
Biochemistry	3	3
Biology	4	–
Chemistry	4	3
English I	6	6
Fundamentals of Nursing	12	10
Physics	4	3
Physiology	4	6
Total	41	37
Second Year		
Educational Psychology	2	2
English II	5	4
General Psychology	3	3
Medical Specialties	1	1
Medical-Surgical Nursing	16	16
Medicine	1	1
Microbiology	3	6
Nutrition	3	3
Pharmacology	–	3
Sociology	2	–
Surgery	2	2
Total	38	41

Subject	Credits	Credits
Third Year		
Advanced Medical-Surgical Nursing	4	–
Child Health Nursing	–	9
Contemporary Social Problems	–	3
Introduction to Elementary Statistics	3	3
Introduction to Research Methodology	2	–
Maternal & Child Health Nursing	–	9
Mental Hygiene & Fundamentals of Psychiatry	2	–
Obstetric Hygiene & Gynecology	–	3
Obstetrics & Gynecology	3	–
Parasitology	3	–
Pediatric Medicine	2	2
Pediatric Nursing	8	–
Principles & Methods of Teaching	3	3
Pharmacology	3	–
Psychiatric & Mental Health	–	2
Sociology	–	2
Total	33	36
Fourth Year		
Anthropology	–	3
Communicable Disease Control	3	–
Contemporary Social Problems (Family)	3	–
Cultural Anthropology	3	–
Economics	3	3
Human Relations: Theory & Process of Administration	3	–
Introduction to Research	–	2
Maternal & Child Health Nursing	8	–
Nursing Administration	–	9
Principles of Administration & Human Relations	–	3
Public Health Nursing	8	9
Public Health Organization & Administration	3	3
Seminar in Nursing	–	2
Total	34	34

The college now offers a bachelor of science degree program in nursing. It formerly also offered higher diploma programs in internal and surgical nursing, and in motherhood and childhood nursing. The bachelor's degree programs offered in 1964-68 and 1970-74 are illustrated in Table 3.17.

In 1964-65, there were 51 students and 7 teachers. In 1970-71, there were 118 students (all women) and 7 fulltime plus 25 part-time teachers. In 1975-76, there were 165 students (all women) and 34 teachers. In 1978-79, there were 296 students and 15 teachers. In 1978-79, 13 (4.3%) of the students were enrolled in graduate programs. There were 670 volumes in 1975-76 and 675 in 1978-79.

COLLEGE OF NURSING AND MIDWIFERY. *See* College of Nursing.

COLLEGE OF PHARMACY—Established in 1936 as part of the COLLEGE OF MEDICINE, this college was one of the 12 colleges which formed the University of Baghdad in 1956. It has also been known as the COLLEGE OF PHARMACY AND CHEMISTRY and as the SCHOOL OF PHARMACY AND CHEMISTRY.

This college originally offered a five-year program leading to a Diploma of Pharmaceutical Chemist. It now offers a five-year program leading to the degree of Bachelor of Science in Pharmacy. Admission requires a grade of at least 70% in biology, chemistry, and physics on the preparatory baccalaureate examination, scientific section. This college also offers master of science degree programs in pharmaceutics, pharmaceutical chemistry, pharmacognosy and medical plants, and toxicology; and a doctor of philosophy degree program in pharmaceutical chemistry. Admission to the graduate programs is restricted to graduates of a college of pharmacy or college of medicine.

In 1954-55, there were 175 students. In 1964-65, there were 338 students and 29 teachers. In 1970-71, there were 707 students (39.6% women) and 37 fulltime and 21 part-time teachers. In 1978-79, there were 813 students and 40 teachers. In 1975-76, 15 (1.8%) of the students were enrolled in graduate programs, compared to 29 (3.5%) in 1978-79. There were 7,000 volumes in 1975-76, and 10,950 in 1978-79.

COLLEGE OF PHYSICAL EDUCATION—This college was established in Baghdad in 1955 as the HIGHER INSTITUTE OF PHYSICAL EDUCATION (also known as the INSTITUTE OF PHYSICAL TRAINING). It offered a three-year program leading to a Diploma in Physical Education to prepare physical education teachers and coaches. The institute became the COLLEGE OF PHYSICAL EDUCATION of the University of Baghdad in 1958, and the diploma program was replaced by a bachelor of arts degree program at the same time. This college has also been known as the COLLEGE OF SPORT EDUCATION.

This college offers a bachelor of arts degree program in physical education with majors such as teaching physical education, soccer coaching, and youth welfare work. Beginning in 1987-88, majors will be offered in sports teaching, sports training, and youth guidance. Graduates serve as coaches, youth workers, or teachers of physical education in intermediate schools, preparatory and preparatory-level schools, and teacher training institutes. A master of arts degree program in physical education is also offered.

In 1970-71, there were 787 students (30.2% women) and 25 fulltime and 18 part-time teachers. In 1975-76, there were 811 students (31.6% women) and 63 teachers. In 1978-79, there were 822 students and 30 teachers. The number of volumes in 1975-76 totalled 4,300, compared to 7,610 volumes in 1978-79.

COLLEGE OF POLITICAL SCIENCE AND ECONOMICS. *See* College of Administration and Economics.

COLLEGE OF POLITICS—This college was established in 1987 by a reorganization of the COLLEGE OF LAW AND POLITICS into two separate colleges. It offers bachelor of arts and master of arts degree programs in political science.

COLLEGE OF SCIENCE, BAGHDAD—This college was established in 1949 as the COLLEGE OF SCIENCE, one of 12 colleges which formed the University of Baghdad in 1956. It offers bachelor of science degree programs in biology (botany, microbiology, and zoology), chemistry (analytical, bio-, inorganic, organic, physical, and theoretical), computer science (beginning 1986-87), geology (with an option in geological chemistry), mathematics, and physics. It formerly also offered a bachelor of science degree program in home economics. The curriculum for the bachelor's degree program in mathematics is illustrated in Table 3.18.

Industrial chemistry students (80% of the enrollment in the Department of Chemistry) spend a month each summer and one day per week during the academic year in factories, getting work experience. Other students get some work experience also.

First-year examinations are passed on the first attempt by 60% to 75% of the students. In some years, this college divided the 0-49 failing grade range into two parts: 40-49 weak, and 0-39 very weak. During the period 1951-55 (at least), it used a different grading scale: 89-100 excellent, 80-88 very good, 69-79 good, 60-68 pass, 0-59 weak. During the academic year 1977-78, it adopted the current university grading scale. (See chapter I, section L for further information on grading.)

This college also offers master of science degree programs in biology, chemistry, computer science (beginning 1986-87), geology, mathematics, and physics, requiring one year of coursework (eight courses, 24 credits) and one year of thesis research (8 credits). Admission requires a grade average of at least 70% in the bachelor's degree program. The first master's degree program was introduced in chemistry in 1963, and 6 students were admitted. The curriculum for the Master of Science in Solid State Physics, offered in 1978-79,

Table 3.18. Bachelor of Science Curriculum in Mathematics, 1971-75, College of Science, University of Baghdad

Subject Hours/Week:	Lec	Lab	Subject Hours/Week:	Lec	Lab
First Year			**Third Year**		
Botany	3	2	Complex Numbers	5	–
Chemistry	3	4	Geometry II	4	–
Geology	3	2	Linear Algebra	5	–
Mathematics I	5	–	Mathematics II	4	–
Physics	3	4	Real Analysis	4	–
Zoology	2	3	Statistics I	3	2
Total	19	15	Total	25	2
Second Year			**Fourth Year**		
Algebra I	4	–	Algebra II	3	–
Applied Mathematics	5	–	Complex Analysis	3	–
Electricity & Light	3	1½	Differential Equations	3	–
Geometry I	3	–	Foundations of Mathematics	3	–
Mechanics, Heat, & Sound	3	1½	Real Analysis II	3	–
Modern Mathematics	5	–	Statistics II	3	2
Total	23	3	Total	18	2

Lec = Lecture, Lab = Laboratory.

included the following courses, with hours per week indicated in parentheses:

First Semester—classical mechanics (3), electromagnetic theory (3), mathematical physics (3), and quantum mechanics (3). Total: 12 hours per week.

Second Semester—foreign language (-), molecular physics (3), plasma physics (3), solid state physics (3), and statistical physics (3). Total: 12 hours per week. In addition, a thesis was required.

Doctor of philosophy degree programs are offered in biology, chemistry (since 1973), geology, and mathematics.

In 1954-55, the college had 295 students; in 1964-65, there were 945 students and 90 teachers. In 1970-71, there were 3,211 students (39.3% women) and 324 fulltime and 232 part-time faculty. In 1975-76, there were 2,298 students (48.7% women) and 285 teachers. Also in that year, 244 (10.6%) of the students were enrolled in graduate programs. In 1986-87, there were an estimated 3,400 students (with an estimated 200 or 5.8% in graduate programs) and 210 teachers. In 1975-76, the library had 72,000 volumes.

College of Science, Basrah. *See* College of Science, University of Basrah.

College of Science, Mosul. *See* College of Science, University of Mosul.

College of Sport Education. *See* College of Physical Education.

College of Technology. *See* College of Engineering Technology.

College of Technology Engineering. *See* College of Engineering Technology.

College of Theological Studies. *See* College of Al-Shari'a.

College of Urban and Regional Affairs—This college was established in 1971 as the Center of Urban and Regional Planning, also known as the Center of Regional and Urban Planning. Administered by the College of Engineering, the center offered a two-calendar-year higher diploma program in urban and regional planning. In 1975, the center had 40 students. In 1980, the higher diploma program was upgraded to a master of science degree program. In 1987, the center was converted to the College of Urban and Regional Affairs.

The master of science degree program includes courses in economics, environment, housing, industrial planning, rural planning, and transportation. Admission is restricted to persons with a bachelor's degree in architectural engineering, civil engineering, economics, geography, sociology, or statistics.

This college also provides technical assistance to and in-service training courses for personnel in governmental agencies related to planning and development, such as the Ministries of Heavy Industries, Light Industries, Local Government, and Planning, and the governments of major cities and towns.

College of Veterinary Medicine—This college was established in Abu-Ghraib (10 miles west of Baghdad) by the Ministry of Agriculture and Agrarian Reform in 1955. It was one of 12 colleges which formed the University of Baghdad in 1956.

This college offers a five-year program leading to the Bachelor of Veterinary Medicine and Surgery. Admission requires a grade of at least 70% in biology, chemistry, and physics on the preparatory baccalaureate examination, scientific section. The curriculum is illustrated in Table 3.19.

Table 3.19. Bachelor of Veterinary Medicine and Surgery Curriculum, 1977-81, College of Veterinary Medicine, University of Baghdad

Subject	T	P
First Year		
Agricultural Economics	*	*
Anatomy	*	*
Animal Management	*	*
Arabic Society	*	*
Biology	*	*
Biostatistics	*	*
Chemistry	*	*
Physics	*	*
Poultry Management	*	*
Second Year		
Anatomy	*	*
Biochemistry	*	*
Embryology (2nd semester)	*	*
Genetics (1st semester)	*	*
Histology	*	*
Physiology	*	*
Third Year, First Semester		
Bacteriology	3	3
Nutrition	2	3
Parasitology	3	3
Pathology	3	3
Pharmacology	3	3
Total	14	15
Third Year, Second Semester		
Bacteriology	3	3
Nutrition	2	2
Parasitology	3	3
Pathology	3	3
Pharmacology	3	3
Total	14	14
Subject *(continued)*	**T**	**P**
Fourth Year, First Semester		
Animal Breeding	3	–
Clinical Studies	–	4
Fertility	3	3
Fish Diseases	2	2
Milk Hygiene	2	2
Morbid Anatomy	2	2
Surgery	2	3
Veterinary Medicine	4	–
Total	18	16
Fourth Year, Second Semester		
Animal Hygiene	3	–
Arabic Culture & Sociology	2	–
Artificial Insemination	1	2
Clinical Studies	–	4
Infectious Diseases	4	–
Meat Hygiene	2	3
Poultry Diseases	2	2
Surgery	2	3
Veterinary Medicine	3	–
Total	19	14
Fifth Year, First Semester		
Clinical Pathology	2	–
Infectious Diseases	4	–
Obstetrics & Gynecology	2	2
Poultry Diseases	1	–
Surgery	2	2
Veterinary Medicine	3	–
Total	14	4
Fifth Year, Second Semester		
Clinical Studies & Practice	–	15
Forensic Medicine	2	1
Obstetrics	–	2
Surgery	–	2
Veterinary Medicine	2	–
Total	4	20

T = Theory, P = Practical; * = Data not available.

This college also offers master of science degree programs in animal physiology, medical diagnosis, science of diseases, veterinary anatomy, veterinary medicine and therapeutics (pharmacology), veterinary microbiology, veterinary parasitology, veterinary public health, and veterinary surgery and obstetrics. Admission requires a grade average of at least 70% in the bachelor's degree program.

In 1964-65, this college had 156 students and 31 teachers. In 1970-71, there were 312 students (2.2% women). In 1975-76, there were 776 students (14.5% women), 61 teachers. Also in that year, 27 (3.4%) of the students were enrolled in graduate programs. In 1978-79, students totalled 1,987 (61 or 3.0% graduate students) with 80 teachers. There were 13,810 volumes in 1978-79.

COLLEGE OF WOMEN. *See* College for Women.

COMPUTER CENTER—No academic programs.

CONSULTING ENGINEERING BUREAU—Administered by the College of Engineering, the bureau is staffed by faculty members who assist industries and governmental agencies which have engineering-related problems. No academic programs.

DAR AL-HIKMA—Literally "House of Wisdom," this division is also known as the INSTITUTE OF TRANSLATION. Established in 1986, it translates research papers and books in science and human (social) studies.

DENTAL RESEARCH CENTER—No academic programs.

HIGH APPLIED ENGINEERING INSTITUTE. *See* Higher Institute of Industrial Engineering.

HIGH ENGINEERING INSTITUTE—Also known as the INSTITUTE OF ENGINEER TRAINING, this institute was established an an independent institution. It later was incorporated into the University of Baghdad. In 1965, it was merged with the Higher Institute of Industrial Engineering to form the TECHNOLOGY INSTITUTE of the University of Baghdad. (See also Technology Institute, University of Baghdad.)

HIGH INSTITUTE OF MEDICAL TECHNOLOGY—Established in 1965 as part of the College of Medicine, this institute was also known as the HIGH INSTITUTE OF TECHNICAL MEDICINE, TECHNICAL MEDICINE INSTITUTE and as the VOCATIONAL INSTITUTE OF MEDICAL TECHNOLOGY. In 1969, it became the TECHNICAL INSTITUTE OF MEDICINE, BAGHDAD, one of the technical institutes.

This institute offered a diploma program in medical technology which required two calendar years (September to September), considered to be the equivalent of three academic years (i.e., two academic years of coursework, 30 weeks of training in hospitals and medical laboratories, and a comprehensive examination). The 1965-67 curriculum in medical laboratory technology (now called clinical pathology), offered by the High Institute of Medical Technology included the following courses, with the hours per week noted in parentheses (lecture/laboratory):

First Semester—anatomy (2/-); biology (2/-); chemistry I (5/6); mathematics (2/-); nursing, hygiene, and medical ethics I (1/-); physics I (4/4); and physiology I (2/3). Total: 18/13 hours.

Second Semester—chemistry II (3/4); nursing, hygiene, and medical ethics II (1/-); physics II (2/3); and physiology II (2/3). Total: 8/10 hours.

Third Semester—biochemistry (2/2); clinical chemistry I (4/6); clinical physiology I (-/2); health, disease, and medical terminology I (1/-); hematology I (2/2); laboratory technology I (2/4); microbiology/parasitology I (1/3). Total: 12/19 hours.

Fourth Semester—clinical chemistry II (4/8); clinical physiology II (-/2); health, disease, and medical terminology II (1/-); hematology II (2/2); histology (1/2); laboratory technology II (2/4); and microbiology/parasitology II (1/3). Total: 11/21 hours.

In addition, 30 weeks of training in hospitals and medical laboratories was required.

HIGHER AGRICULTURE INSTITUTE. *See* College of Agriculture.

HIGHER INSTITUTE OF ACCOUNTANCY, BAGHDAD—Established as a separate institution, this institute was also known as the HIGH INSTITUTE OF ACCOUNTANCY, HIGHER ACCOUNTANCY INSTITUTE, and VOCATIONAL INSTITUTE OF ACCOUNTANCY. It was merged with the commerce section of the former College of Commerce and Economics of the University of Baghdad in 1963 to form the COLLEGE OF COMMERCE AND ACCOUNTANCY, now known as the COLLEGE OF ADMINISTRATION AND ECONOMICS.

The institute offered a three-year program of study leading to a Diploma in Accountancy. Graduates were admitted to the fourth year of the bachelor's degree program in commerce of the former College of Commerce and Economics.

HIGHER INSTITUTE OF INDUSTRIAL ENGINEERING—This institute was established in 1955 as a separate institution. Also known as the HIGH APPLIED ENGINEERING INSTITUTE, HIGHER INDUSTRIAL ENGINEERING INSTITUTE, and INSTITUTE OF HIGHER INDUSTRIAL ENGINEERING, it later became part of the University of Baghdad. In 1964, it had 28 faculty members and 331 students. In 1965, it was merged with the High Engineering Institute of the University of Baghdad to form the TECHNOLOGY INSTITUTE of the University of Baghdad. In 1969, the Technology Institute was renamed the INSTITUTE OF TECHNOLOGY, BAGHDAD, and separated from the University of Baghdad. It is now one of the technical institutes.

This institute offered a three-year diploma program in industrial engineering to train technologists for employment in a role between that of technician and that of engineer. The curriculum in civil engineering, building construction option, is illustrated in Table 3.20.

HIGHER INSTITUTE OF LANGUAGES. *See* Institute of Languages.

HIGHER INSTITUTE OF PHYSICAL EDUCATION. *See* College of Physical Education.

HIGHER INSTITUTE OF PUBLIC ADMINISTRATION. *See* Institute of Public Administration.

HIGHER INSTITUTE OF SECRETARIAL STUDIES. *See* Higher Secretarial Institute.

HIGHER INSTITUTE OF TEACHER TRAINING. *See* College of Education.

HIGHER SECRETARIAL INSTITUTE—Established in 1964, this institute offered a three-year program leading to a Higher Diploma in Secretarial Studies. Also known as the HIGHER INSTITUTE OF SECRETARIAL STUDIES, SECRETARIAL INSTITUTE,

Table 3.20. Diploma in Civil Engineering Curriculum, Building Construction Option, Higher Industrial Engineering Institute, University of Baghdad

Subject Hours/Week:	Lec	Lab
First Year		
Chemistry	4	–
Descriptive Geometry	2*	–
Electricity	3*	–
English Language	3	–
Mathematics I	5	–
Physics	4	4
Surveying I	3	6
Technical Drawing	1	6
Second Year		
Architectural Drawing	2	–
Building Construction	2	–
Building Materials Lab	–	4½
Dynamics	3*	–
Geology	2	–
Hydraulics & Irrigation Drainage	2	–
Mathematics II	4	–
Statics	3*	–
Second Year *(continued)*		
Strength of Materials & Structural Design	5*	–
Surveying II	3	3
Testing Materials	1	2
Workshop Practice	–	6
Third Year		
Estimating	2	–
Foundations	3	–
Highway Engineering	3*	–
Housing	2	–
Railway Engineering	3*	–
Reinforced Concrete	3	2
Sanitary Engineering	3	–
Soil Mechanics Lab	–	2
Strength of Materials II	2	–
Structural Design	6	–
Testing Materials Lab	–	2
Theory of Structures	4	–

Lec = Lecture, Lab = Laboratory.
*One semester only

and Vocational Institute of Secretarial Studies, this institute was separated from the University of Baghdad and became the Institute of Administration, Risafa, one of the technical institutes, in 1969.

The 1967-70 curriculum offered by the institute included the following courses: accounting I and II; Arabic language I and II; Arabic society; Arabic typing I-III; banking; business administration; civil service law; correspondence I and II; English language I-III; English typing I-III; office administration; personnel management; secretarial work; shorthand I-III; statistics; and translation.

Higher Teacher Training Institute. *See* College of Education.

Home Arts Institute—This institute was established in 1951 as the Department of Art of Queen Aliyah College, one of 12 colleges which formed the University of Baghdad in 1956. Queen Aliyah College was renamed Al-Tahreer College in 1958, and College for Women sometime later. When the College for Women was closed in 1969, the Department of Art was reorganized into the Home Arts Institute, also known as the Institute of Home Arts. In 1970, it had 17 fulltime, 18 part-time, and 1 foreign faculty member, and 119 students (all women). In 1972, it became the Institute of Applied Arts, Baghdad, one of the technical institutes.

The Home Arts Institute offered two-year diploma programs in art education, interior design and furnishing, and sewing and tailoring. The programs involved the entire calendar year (September to September), which was considered the equivalent of three academic years. This institute also offered a two-year bachelor of fine arts degree program in art, for which the two-year diploma in art education was a prerequisite.

INSTITUTE OF ADMINISTRATION—Also known as the ADMINISTRATION INSTITUTE and as the COLLEGE OF GENERAL ADMINISTRATION, this institute offered a two-year diploma program in stores (warehouse) management, a three-year diploma program in general administration, and a bachelor of science degree program in secretarial studies. The bachelor's degree program required three years of study following completion of the first year of the diploma program in general administration. In 1970, this institute had 18 fulltime, 9 part-time, and 1 foreign faculty member, and 294 students (132 men, 162 women). In 1970, it became part of the College of Administration and Economics.

INSTITUTE OF ENGINEER TRAINING. *See* High Engineering Institute.

INSTITUTE OF FOREIGN LANGUAGES. *See* Institute of Languages.

INSTITUTE OF FORESTRY—Originally an independent institution and then a part of the University of Baghdad, this institute was moved to Mosul in 1964 and merged with the College of Agriculture and Forestry of the University of Mosul. It offered a three-year program leading to a diploma.

INSTITUTE OF HIGHER EDUCATION—This institute offers non-credit, in-service training courses for university administrators.

INSTITUTE OF HIGHER INDUSTRIAL ENGINEERING. *See* Higher Institute of Industrial Engineering.

INSTITUTE OF HOME ARTS. *See* Home Arts Institute.

INSTITUTE OF LANGUAGES—Also known as the HIGHER INSTITUTE OF LANGUAGES, and as the INSTITUTE OF FOREIGN LANGUAGES, this institute was merged with the College of Education and the College of Literature in 1968 to form the COLLEGE OF ARTS.

The institute offered a three-year diploma program in foreign languages which was expanded to a four-year bachelor of arts degree program in 1965. The bachelor of arts curriculum in Spanish, offered in 1962-66, included the following courses: Arabic I and II; methodology; psychology; second foreign language I-IV; Spanish composition I-III; Spanish conversation I-III and Spanish conversation IV and reading III; Spanish comprehension; Spanish dictation I and II; Spanish grammar I-IV; Spanish literature I and II; Spanish reading I and II; Spanish texts I and II; and Spanish translation I-III.

INSTITUTE OF MEDICAL TECHNOLOGY. *See* High Institute of Medical Technology.

INSTITUTE OF PUBLIC ADMINISTRATION—Established in 1959 as an independent institution (also known as the HIGHER INSTITUTE OF PUBLIC ADMINISTRATION), this institute offered a four-year diploma program in public administration. In 1964, it had 16 faculty members and 542 students. It was later incorporated into the University of Baghdad. It has since been closed.

INSTITUTE OF TRANSLATION. *See* Dar Al-Hikma.

LITERARY COLLEGE. *See* College of Arts.

MEDICAL RESEARCH CENTER. *See* Center for Medical Research.

PSYCHOLOGY CLINIC—No academic programs.

QUEEN ALIYAH COLLEGE. *See* College for Women.

RESEARCH CENTER FOR PALESTINIAN STUDIES. *See* Center for Palestinian Studies Research.

SCHOOL OF PHARMACY AND CHEMISTRY. *See* College of Pharmacy.

SECRETARIAL INSTITUTE. *See* Higher Secretarial Institute.

SUPERVISORY STAFF FOR THE STUDY OF LIBRARY SCIENCE AND DOCUMENTATION—No academic programs.

TEACHER TRAINING COLLEGE. *See* College of Education.

TECHNICAL AGRICULTURAL INSTITUTE. *See* Technical Institute of Agriculture.

TECHNICAL INSTITUTE OF AGRICULTURE—Established in Abu-Ghraib in 1964, this institute was also known as the TECHNICAL AGRICULTURAL INSTITUTE and as the VOCATIONAL INSTITUTE OF AGRICULTURE. It offered a two-year diploma program in agriculture. In 1969, it became the Technical Institute of Agriculture, Baghdad, one of the technical institutes.

TECHNICAL MEDICINE INSTITUTE. *See* High Institute of Medical Technology.

TECHNOLOGY INSTITUTE—Also known as the BAGHDAD INSTITUTE OF TECHNOLOGY, and VOCATIONAL INSTITUTE OF TECHNOLOGY, this institute was formed in 1965 by a merger of the Higher Institute of Industrial Engineering (also known as the High Applied Engineering Institute) and the High Engineering Institute. In 1969, it became the INSTITUTE OF TECHNOLOGY, BAGHDAD, one of the technical institutes.

The Technology Institute offered a one-year certificate program in electrical and mechanical technology; a two-year diploma program in civil technology; two-year diploma programs in civil, electrical, and mechanical technology (programs formerly offered by the High Engineering Institute); and two-year diploma programs in applied engineering (programs formerly offered by the High Applied Engineering Institute).

VOCATIONAL INSTITUTE OF ACCOUNTANCY. *See* Higher Institute of Accountancy.

VOCATIONAL INSTITUTE OF AGRICULTURE. *See* Technical Institute of Agriculture.

VOCATIONAL INSTITUTE OF MEDICAL TECHNOLOGY. *See* High Institute of Medical Technology.

VOCATIONAL INSTITUTE OF SECRETARIAL STUDIES. *See* Higher Secretarial Institute.

VOCATIONAL INSTITUTE OF TECHNOLOGY. *See* Technology Institute.

WOMEN'S COLLEGE. *See* College for Women.

UNIVERSITY OF BASRAH (JAMI'AT AL-BASRAH)

Located in Basrah, a city in southeastern Iraq, the University of Basrah (also known as BASRAH UNIVERSITY) was established in 1967 by a reorganization of five colleges—arts, education, engineering, law and economics, and science—of the University of Baghdad. The colleges had been established in Basrah in 1964.

In 1970-71, there were 213 fulltime teachers plus 184 part-time teachers and 3,216 students (20.3% women). In 1978-79, there were 509 teachers and 10,251 students (29.7% women). In 1981-82, there were 584 teachers and 10,440 students (31.1% women).

The central library contained 64,060 volumes in 1972-73; 87,640 volumes in 1978-79; and 123,000 volumes in 1981-82. In addition to the central library, there are 10 specialized libraries. In 1972-73, they contained a total of 21,326 volumes; in 1981-82, 246,000 volumes. The central library has 1,400 current periodicals.

The University of Basrah has had the following divisions:

Center for Arab Gulf Studies—No academic programs. It has a research library of 8,000 volumes in Arabic, and 4,000 volumes in foreign languages (mostly in English).

Center for Marine Sciences—No academic programs.

College of Administration and Economics—This college was established in Basrah in 1964 as the College of Commerce, a private institution sponsored by the Basrah branch of the Iraqi Economists Society. It was affiliated with and supervised by the University of Baghdad. It offered bachelor's degree programs in accounting, business administration, and commerce, following the curriculum of the College of Commerce of the University of Baghdad.

The College of Commerce was transferred to the University of Al-Mustansiriyah in 1965, becoming one of three colleges of administration attached to that university. In 1974, it became the College of Administration and Economics of the University of Basrah. It has also been known as the College of Economics and Administration and as the College of Management and Economics. It now offers bachelor of arts degree programs in administration and economics. Master of arts degree programs are being planned in accountancy and management.

College of Agriculture—This college offers bachelor of science degree programs in agricultural education, animal husbandry, and food and dairy technology.

College of Arts—This college was established in 1964 as an affiliate of the University of Baghdad. It was one of five colleges which formed the University of Basrah in 1967. It has also been known as the College of Humanities and as the College of Liberal Arts.

This college offers bachelor of arts degree programs in Arabic, economics, English, French, geography, German, history, and library science. The program in economics was previously offered by a separate College of Law and Economics, which was merged with the College of Arts. A degree program in law, offered by this college after the merger, has been offered by a separate College of Law since 1984. The College of Arts also offers master of arts degree programs, and a Ph.D. degree program in history.

In 1964, this college had 251 students. In 1970, it had 46 fulltime, 47 part-time, 3 foreign faculty members; and 1,364 students (1,048 men, 316 women).

College of Commerce. *See* College of Administration and Economics.

College of Economics and Administration. *See* College of Administration and Economics.

College of Education—This college was established in 1964 as an affiliate of the University of Baghdad. It was one of five colleges which formed the University of Basrah in 1967. It was closed in 1970 and reopened in 1977. In 1981, it had 127 faculty members.

This college offers bachelor of arts degree programs in counseling and English. Graduates of the program in English teach in intermediate schools, preparatory schools, vocational schools, and primary teacher training institutes. The program in counseling is designed to prepare educational guidance personnel for intermediate schools. Most of those who enroll in this program are primary school teachers who have at least three years of teaching experience and who are on educational leave. It is hoped that every intermediate school will have a counselor by the year 2000.

College of Engineering—This college was established in 1964 as an affiliate of the University of Baghdad. It was one of five colleges which formed the University of Basrah in 1967. It offers bachelor of science degree programs in chemical (since 1980-81), civil, electrical, marine (since 1980-81), and mechanical engineering. The curriculum in civil engineering, offered in 1974-78, included the following courses, with units indicated in parentheses:

First Year—Arab world (4), civil defense (1), electrical engineering (5), engineering drawing (3), engineering materials I (4), English language (4), mathematics I (7), mechanics (7), physical education (1), and workshops (2). Total: 38 units.

Second Year—civil engineering (1), engineering economics I (2), engineering geology (5), engineering materials II (6), engineering statistics (3), hydraulics I (3), mathematics II (5), mechanical engineering (3), strength of materials (7), and surveying (9). Total: 44 units.

Third Year—buildings (3), concrete (7), constructional analysis (7), engineering analysis (3), hydraulics II (6), hydrology (3), irrigation and drainage (4), soil mechanics (6), and transportation (5). Total: 44 units.

Fourth Year—engineering economics II (2), foundations (4), harbors (5), irrigation design (5), methods of construction (5), political report (1), programming (2), project (6), sanitary engineering (5), specifications (5), and steel design (5). Total: 45 units.

This college formerly offered a graduate program leading to a Higher Diploma in Engineering. A master of science degree program in chemical engineering is being planned.

In 1964-65, there were 140 students. In 1970-71, there were 38 fulltime and 35 part-time teachers, and 692 students (6.2% women). In 1977-78, there were 91 teachers and 1,639 students. In 1981-82, there were 108 teachers and 1,639 students.

College of Humanities. *See* College of Arts.

College of Law—This college was established in 1984. It offers a bachelor of arts degree program in law.

College of Law and Economics—This college was established in 1964 as an affiliate of the University of Baghdad. One of five colleges which formed the University of Basrah in 1967, it offered bachelor of science degree programs in economics and in law. In 1964, it had 245 students. It was later merged with the College of Arts.

College of Liberal Arts. *See* College of Arts.

College of Management and Economics. *See* College of Administration and Economics.

College of Medicine—Established in 1967, this college awards a six-year Bachelor of Medicine, Bachelor of Surgery, and a five-year Bachelor of Science in Pharmacy. In 1970-71, there were 26 fulltime and 26 part-time teachers, and 253 students (19.7% women). In 1981-82, there were 87 teachers.

College of Physical Education—This college offers a bachelor of arts degree program in physical education. Graduates teach in intermediate schools, preparatory schools, and primary teacher training institutes.

College of Science—This college was established in 1964 as an affiliate of the University of Baghdad. It was one of five colleges which formed the University of Basrah in 1967. It offers bachelor of science degree programs in biology, chemistry, mathematics, and physics; master of science degree programs in biology and chemistry; and doctor of philosophy degree programs in biology and chemistry. A doctoral program in fish and marine biology is being planned. The master of science degree program in physics, offered in 1982-84, included the following courses, with units indicated in parentheses:

First Year—electrodynamics (3), electronics instrumentation (2), mathematical physics (3), nuclear physics (3), quantum mechanics (3), selected topics (3), and solid state physics (3). Total: 20 units.

Second Year (research year; no course units)—seminar I: incization energies of alkali ions using a pseudopotential approach, seminar II: theory of atomic centers and calculations of absorption bands, and a thesis.

In 1964-65, there were 187 students. In 1970-71, there were 78 fulltime and 60 part-time teachers, and 907 students (27.1% women). In 1981-82, there were 115 teachers.

College of Veterinary Medicine—This college was established in 1974 and transferred to the University of Mosul in 1976.

Computer Center—No academic programs.

Cultural Center—No academic programs.

Engineering Consultant Bureau—No academic programs.

Faculty of Higher Studies and Scientific Research—This faculty supervised the graduate programs offered by the various colleges of the university. This responsibility has been returned to the respective departments and colleges.

Medical Center—No academic programs.

Natural History Museum—No academic programs.

UNIVERSITY OF KUFA

The University of Kufa (also known as KUFA UNIVERSITY) was established in January 1988 in Kufa (Najaf Governorate). It was formed by the development of new colleges plus the transfer of three divisions of the University of Al-Mustansiriyah: the Academy of Fine Arts in Hilla, the College of Islamic Studies in Najaf, and the College of Medicine in Kufa.

UNIVERSITY OF MOSUL (JAMI'AT AL-MOSUL)

Located in the city of Mosul (biblical Nineveh) in northern Iraq, the University of Mosul was established in 1967 by a reorganization of six colleges. These colleges—agriculture and forestry, engineering, humanities, medicine, pharmacy, and science—had been established in Mosul as affiliates of the University of Baghdad between 1959 and 1964. The university received assistance from UNESCO to develop academic programs in biology, chemistry, engineering, geology, and statistics.

Prior to the 1968-69 academic year, this university used 60% as the minimum passing grade. (For additional information on grading, see chapter I, section L.)

In 1970-71, there were 605 fulltime and 163 part-time teachers, and 4,553 students (18.3% women). In 1978-79, there were 725 teachers and 12,048 students (24.3% women). In 1982-83, there were 950 teachers and 14,500 students. In 1986-87, there were 17,000 students.

The central library had 69,900 volumes in 1978-79; 147,903 volumes in 1981-82; 350,500 volumes and 1,165 current periodicals in 1986-87. In addition to the central library, there are 12 college libraries.

The University of Mosul has had the following divisions:

Center for Applied Agricultural Research—Part of the College of Agriculture and Forestry. No academic programs.

Center for Applied Scientific Research—Part of the College of Science. No academic programs.

Center for Archaeological and Cultural Research—This center was originally the Department of Antiquities of the College of Arts. At that time, it offered a bachelor of arts degree program in antiquities (archaeology). In 1971, it was converted to a research center. No academic programs.

Center for Lifelong Education—This center offers non-credit, in-service training courses. No academic programs.

Center for Management and Economic Research—Also known as the Research Center for Management and Economics, this center is staffed by faculty members of the College of Administration and Economics. It serves governmental agencies and the private sector. Because faculty members work at the center in their spare time, they receive most of the money paid to the center. No academic programs.

Center for Medical Research—This center is part of the College of Medicine. No academic programs.

Center for Meteorological Studies—A monitoring station sponsored by the Iraqi Scientific Research Council, this center is administered by the Department of Agricultural Engineering of the College of Engineering. No academic programs.

College of Accountancy and Business Administration. *See* College of Administration and Economics.

College of Administration and Economics—This college was established in Mansoor (the southwest district of the city of Mosul) in 1968 as the College of Accountancy and Business Administration, a private institution. In 1969, it was renamed the College of Administration and Economics, and affiliated with the University of Al-Mustansiriyah. In 1974, it merged with the Higher Institute of Accountancy, Mosul, and became part of the University of Mosul. It has also been known as the College of Business Administration and Economics, College of Law and Economics, and College of Management and Economics.

When it was a private institution, this college offered two-year diploma programs in administration and economics (first year, general studies; second year, specialized), and one-year advanced diploma programs in accounting and business administration (admission to which required a two-year diploma). Courses were offered in the evening, primarily for government employees.

This college now offers bachelor of arts degree programs in accounting, administration, commercial education, economics, and statistics; master of arts degree programs in accounting, administration, and economics; and a doctor of philosophy degree program in economics (since 1986-87). It also offers non-credit, in-service training courses in administration and management. Some of these courses are taught by faculty members from the College of Engineering.

In 1970-71, there were 18 fulltime and 10 part-time teachers, and 482 students (11.2% women). In 1975-76, there were 28 teachers and 1,440 students (25.2% women). In 1985-86, there were 66 teachers and 2,443 students.

College of Agriculture and Forestry—This college was established in Hammam al Alil (25 kilometers south of Mosul) in 1964 as an independent college of agriculture. It was later merged with the Institute of Forestry of the University of Baghdad, and affiliated with that university. It was one of the six colleges which formed the University of Mosul in 1967.

This college offers bachelor of science degree programs in agricultural economics, agricultural education, agricultural extension, agricultural mechanization (transferred from the College of Engineering in 1979), animal husbandry (also translated as animal production and as animal resources), field crops, food technology, forestry, horticulture, plant protection, and soil science. During the period 1968-71, this college also offered a five-year bachelor of science degree program in veterinary medicine and surgery. In 1971, this program was transferred to the College of Veterinary Medicine of the University of Baghdad.

This college offers master of science degree programs in all of the bachelor's degree fields, except for agricultural education. The master of science degree program in agricultural mechanization was introduced in 1987-88.

In 1964-65, there were 10 teachers and 85 students. In 1970-71, there were 91 fulltime and 25 part-time teachers, and 331 students. In 1975-76, there were 104 teachers and 1,331 students (16.9% women). In 1985-86, there were 168 teachers and 1,603 students.

College of Arts—This college was established in 1966 as the College of Humanities, an affiliate of the University of Baghdad. It was one of six colleges which formed the University of Mosul in 1967. In 1971, it was renamed the College of Arts. It has also been known as the College of Liberal Arts.

This college offers bachelor of arts degree programs in Arabic, English, French, history, politics (beginning 1986-87), sociology (beginning 1985-86), and translation. Prior to 1971, it also offered a bachelor of arts degree program in antiquities (archaeology). That degree program was discontinued in 1971, and the Department of Antiquities became the non-academic Center for Archaeological and Cultural Research. Prior to 1974, this college offered a bachelor's degree program in business administration; it was discontinued when the College of Administration and Economics was added to the university in that year. The final grades received by the 250 fourth-year students of the College of Arts in June 1986 were distributed as follows:

Grade Average		# Students	% Students
90-100	excellent	1	0.4
80-89	very good	14	5.6
70-79	good	85	34.0
60-69	average	67	26.8
50-59	poor	12	4.8
0-49	fail	71	28.4

This college also offers master of arts degree programs in Arabic, English literature, history, and scientific English.

In 1970-71, there were 40 fulltime and 23 part-time teachers, and 922 students (28.9% women). In 1975-76, there were 60 teachers and 826 students (38.8% women). In 1985-86, there were 87 teachers and 1,845 students.

College of Business Administration and Economics. *See* College of Administration and Economics.

College of Dentistry—This college was established in 1982. It offers a five-year program of study leading to a Bachelor of Dental Surgery. Because this college is still developing its own faculty, faculty members from the College of Medicine teach the courses in anatomy, histology, and physiology. In 1985, this college had 18 faculty members and 219 undergraduate students.

College of Education—A College of Education affiliated with the University of Baghdad was transferred to the University of Mosul after 1967. It was closed in 1970. A new College of Education was established in 1975. It offers bachelor of arts degree programs in Arabic, education and psychology, English, French (since 1987-88), geography, German (since 1987-88), history, and translation. It offers bachelor of science degree programs in biology, chemistry, mathematics, and physics. Graduates teach in intermediate schools, preparatory schools, vocational schools, and primary teacher training institutes. In 1985-86, there were 221 teachers and 4,380 students.

College of Engineering—This college was established in 1963 as an affiliate of the University of Baghdad. It was one of six colleges which formed the University of Mosul in 1967.

This college offers bachelor of science degree programs in architectural engineering (since 1978), civil engineering (since 1963), electrical engineering (since 1964), irrigation and drainage (agricultural engineering, since 1967), and mechanical engineering (since 1967). A program in environmental engineering is being planned, perhaps to begin in 1988-89. The program in architectural engineering was suspended from 1970 to 1978 because of a shortage of faculty. From 1974 to 1979, this college offered a bachelor's degree program in agricultural engineering with options in irrigation and agricultural mechanization (transferred to the College of Agriculture and Forestry in 1979).

Admission to a bachelor's degree program in this college requires at least 70% in mathematics and physics on the preparatory baccalaureate examination, scientific section. Because of the popularity of engineering and the resulting competition for admission, the admitted student with the lowest baccalaureate score in 1986 had mathematics and physics grades of 81 and a total score of 486 (an average of 81%). Prior to the 1968-69 academic year, this college used 60% as the minimum passing grade. The final grades received by the 400 fourth-year students in June 1986 were distributed as follows:

Grade Average		# Students	% Students
90-100	excellent	0	0.0
80-89	very good	5	1.3
70-79	good	32	8.0
60-69	average	60	15.0
50-59	poor	171	42.7
0-49	fail	132	33.0

This college offers master of science degree programs in irrigation and drainage (agricultural engineering), civil engineering (environmental engineering, soil mechanics and foundations, structures, or transportation), electrical engineering (electronics and communications, or power and machines), and mechanical engineering (air conditioning and refrigeration, applied mechanics and engineering materials, or thermal power engineering). A master of science degree program in architectural engineering is being planned and may begin in 1988-89.

From 1976 to 1980, this college offered higher diploma programs in each field in which a bachelor's degree program was offered. Students who did well could use the higher diploma courses to meet the course requirements of a master's degree program.

This college offers a doctor of philosophy degree program in civil engineering (with options in environmental engineering or structures), beginning with the 1987-88 academic year. Options in soil mechanics and transportation may be added in 1988-89. Doctoral degree programs are also being planned in other fields, as follows:

Department	Option	Tentative Date
Agricultural Engineering	Fluid Mechanics and Hydraulics	1988-89
	Irrigation and Drainage	1989-90
Electrical Engineering	Electronics and Communications	1991-92
	Power and Machines	1988-89
Mechanical Engineering	Internal Combustion Engines	1989-90
	Vibrations	1988-89

Each department of this college offers two to four short-term, non-credit, in-service training courses each year (e.g., four-day courses on the application of microprocessors, on electrical power systems, and on electrical applications of power and electronics, all offered by the Department of Electrical Engineering). Most of the persons who take these courses are employed engineers.

This college shares some faculty members with the College of Agriculture and Forestry, the College of Science (computer science and physics), and the university's Computer Center. In 1975-76, there were 91 teachers and 1,680 students (14.0% women). In 1985-86, there were 123 teachers, and an estimated 2,800 students. In that same year, approximately 50 (1.7%) of the students were enrolled in graduate programs.

The college's library is current; 872 (9.4%) of the 9,184 volumes were published during the period 1982-86. The library also contains 870 master's and doctoral theses and 66 specialized journals. In addition, departmental libraries contain altogether approximately 3,000 volumes.

COLLEGE OF HUMANITIES. *See* College of Arts.

COLLEGE OF LAW. *See* College of Law and Politics.

COLLEGE OF LAW AND ECONOMICS. *See* College of Administration and Economics.

COLLEGE OF LAW AND POLITICS—This college was established in 1983. It offers bachelor of arts degree programs in law and political science. In 1985, it had 28 faculty members and 569 students.

COLLEGE OF LIBERAL ARTS. *See* College of Arts.

COLLEGE OF MANAGEMENT AND ECONOMICS. *See* College of Administration and Economics.

COLLEGE OF MEDICINE—This college was established in 1958 by the Ministry of Health. In 1960, it became an affiliated college of the University of Baghdad. It was one of six colleges which formed the University of Mosul in 1967.

This college offers a six-year Bachelor of Medicine, Bachelor of Surgery (M.B.B.S.) degree program. The curriculum is illustrated in Table 3.21. Applicants must have received a grade of at least 70% in biology, chemistry, and physics on the preparatory baccalaureate examination, scientific section. In 1986, the admitted student with the lowest baccalaureate score had a score of 546 (an average of 91%). During the academic years 1969-70 through 1979-80, first-year students took biology, chemistry, and physics courses in the College of Science. Since then, these courses have been taken through the College of Medicine.

Table 3.21. Bachelor of Medicine, Bachelor of Surgery Curriculum, 1986-92, College of Medicine, University of Mosul

Subject	T	P	D
First Year			
Anatomy	30	60	–
Computer Science	30	30	–
Medical Biology	90	90	–
Medical Chemistry	–	–	30
Analytical & Inorganic	30	36	–
Organic	45	24	–
Biochemistry	15	30	–
Medical Physics	60	90	30
National Culture	60	–	–
Total	360	360	60
Second Year			
Anatomy	30	240	–
Computer Science	30	30	–
Embryology	30	–	–
Histology	60	90	–
Medical Biochemistry	120	90	30
National Culture	60	–	–
Physiology	150	90	30
Total	510	540	60
Third Year			
Community Medicine	30	60	–
History of Arab Medicine	15	–	–
Medical Ethics	15	–	–
Medicine	45	60*	–
Microbiology	85	60	5
Medical Parasitology	45	60	–
National Culture	60	–	–
Pathology	120	120	–
Pharmacology	105	60	30
Surgery (General)	30	–	–
Total	550	420	35

Subject	T	P	C
Fourth Year			
In-Patient Clinic			
Community Medicine	90	120	–
Forensic Medicine	60	60	–
Medicine	120	–	80
National Culture	60	–	–
Obstetrics	60	–	80
Pediatrics (Normal)	15	–	–
Surgery	90	–	80
Total	495	180	240
Fifth Year			
Out-Patient Clinic			
Dermatology & Venereal Diseases	30	–	24
Gynecology	30	–	48
Medicine	75	–	48
Neurology	30	–	24
Ophthalmology	20	–	24
Orthopedics	45	–	24
Otorhinolaryngology	20	–	24
Pediatrics	45	–	48
Psychiatry	45	–	24
Radiology	30	–	24
Surgery	50	–	24
Total	420	–	336

Sixth Year
In-Patient Clinic

Anesthesia & Cardiovascular Surgery (2 weeks), Infectious Diseases (2 weeks), Medicine (12 weeks), Neurology & Psychiatry (2 weeks), Obstetrics & Gynecology (8 weeks), Orthopedics (3 weeks), Pediatrics (6 weeks), Radiology (2 weeks), Surgery (8 weeks), Urology (3 weeks), for a total of 48 weeks.

T = Theory, P = Practice, D = Discussion, C = Clinic (all hours per year).
*Clinic, not practice.

The first year also includes classes in Arab society and English language. The theory portion of the first-year course in medical physics includes four hours of review of the trigonometry and calculus studied in preparatory school. The theory portion of the third-year course in microbiology is divided into bacteriology (40), immunology (21), mycology (7), and virology (17). The theory portion of the fourth-year course in forensic medicine is divided into legal medicine (45) and toxicology (15). The theory portion of the fourth-year course in surgery is divided into general (65), thoracic and cardiovascular (7), and urologic (18). The theory portion of the fifth-year course in surgery is divided into general (30), anesthesia (8), neurosurgery (7), and plastic surgery (5). Between the fourth and fifth years, students are required to complete four weeks of summer training in community medicine. At the end of the sixth year, students take national examinations administered by external examiners for five to 10 days.

This college also offers master of science degree programs in anatomy, bacteriology, biochemistry, community medicine (since 1987-88), microbiology, parasitology, pathology, physiology, and radiology (since 1987-88). Graduates serve as faculty members in this and other medical schools. The M.B.B.S. degree is required for admission to these programs.

Grades awarded by faculty members of the College of Medicine are generally distributed as follows:

Grade		% Students
90-100	excellent	0
80-89	very good	5
70-79	good	20
60-69	average	30
50-59	poor	30
0-49	fail	15

For additional information on grading, see chapter I, section L.

Beginning in 1987-88, this college offers a two-year program of advanced study leading to the Diploma in Radiology. It requires coursework, supervised clinical training, and a small research project.

This college also offers advanced training in clinical specializations, leading to board certification granted by the Arab or Iraqi medical boards. The following specializations are currently offered: gynecology and obstetrics (4 years), medicine (3 years), neurosurgery (4 years), orthopedics (4 years), pediatrics (3¼ years), and surgery (4 years).

The Department of Medical Education, established in 1987-88, offers short-term, non-credit, in-service training courses for faculty members.

In 1964-65, there were 50 teachers and 556 students. In 1970-71, there were 106 fulltime and 33 part-time teachers, and 714 students (17.9% women). In 1975-76, there were 70 teachers and 1,052 students (20.2% women). In 1986-87, there were 130 teachers and 1,700 students. College of Medicine faculty members also teach courses in the College of Dentistry and the College of

Education of the University of Mosul, in the Technical Institute in Mosul, in the School of Nursing in Mosul, and in the College of Medicine of the University of Salahaddin.

College of Pharmacy—Established in 1963, this college had 2 faculty members, 40 students, and a library of approximately 16,000 volumes in 1964-65. It was one of six colleges which formed the University of Mosul in 1967. In 1970, it was transferred to the University of Baghdad. A new College of Pharmacy was scheduled to open for the 1988-89 academic year.

College of Physical Education—This college was established in 1977. It offers a bachelor's degree program in sport education with options in physical education (for teachers), training (for coaches), or youth welfare (for leaders of youth organizations). Those who take the option in physical education teach in intermediate schools, preparatory schools, and primary teacher training institutes. In 1981, this college had 15 faculty members. In 1985, it had 31 faculty members and 915 students (all undergraduate).

College of Science—This college was established in 1963 as an affiliated college of the University of Baghdad. It was one of six colleges which formed the University of Mosul in 1967.

This college offers bachelor of science degree programs in biology (options in botany, microbiology, or zoology), chemistry (options in chemistry and biochemistry), computer science (since 1982-83), geology, mathematics, and physics. A degree program in biochemistry is planned (perhaps beginning in 1989-90.) The degree program in mathematics formerly had an option in statistics. This option was transferred to the College of Administration and Economics in the mid-1980s.

The Department of Biology formerly offered a two-year diploma program to train laboratory assistants, and non-credit, in-service training courses for laboratory technicians. These programs were terminated in 1976 because the Technical Institute in Mosul offers a program in clinical pathology.

This college also offers master of science degree programs in biology (since 1976-77), chemistry (since 1976-77), computer science (since 1987-88), geology (since 1975-76), mathematics (since 1976-77), and physics (since 1977-78). The new program in computer science requires 11 courses plus a thesis. The program in geology includes a remote sensing course. During the academic year 1986-87, the Department of Physics had three master's students: one each in electronics, nuclear physics, and solid state physics. Their work was jointly supervised by the Department of Physics and the Department of Electrical Engineering of the College of Engineering.

The College of Science offers a Ph.D. degree program in chemistry (since 1984-85). Ph.D. programs are being planned in biology (perhaps beginning in 1988-89), and geology (perhaps beginning in 1989-90). Ph.D. programs will eventually be developed in computer science, mathematics, and physics.

This college has Apple, IBM, and NCR minicomputers. It also uses the Honeywell mainframe in the university's Computer Center.

In 1964-65, there were 21 teachers and 360 students. In 1970-71, there were 71 fulltime and 59 part-time teachers, and 2,119 students (20.6% women). In

1975-76, there were 127 teachers and 1,689 students (29.1% women). In 1986-87, there were 224 teachers and 2,430 students. In 1986-87, 63 (2.5%) of the students were enrolled in master's degree programs, and 5 (0.2%) were enrolled in doctoral programs.

College of Veterinary Medicine—This college was established in 1974 as part of the University of Basrah. It was transferred to the University of Mosul in 1976. It offers a five-year program leading to the Bachelor of Veterinary Medicine and Surgery. Admission requires a grade of at least 70% in biology, chemistry, and physics on the preparatory baccalaureate examination, scientific section. In 1975, the College had 9 faculty members. In 1985, it had 92 faculty members and 641 students (all undergraduate).

Computer Center—This center offers computer instruction, programming, and maintenance services for the administrative, teaching, and research units of the university. It also processes data for students and faculty in colleges where computer science is not a major curricular component. No academic programs.

The Computer Center has the following equipment: a Cii Honeywell-Bull (France); one NCR-Tower macrocomputer and two Phillips (Netherlands) macrocomputers; 310 minicomputers (including 61 minicomputers in the College of Engineering and 20 in the College of Medicine) purchased since 1985 from IBM, NCR, NEC, Olivetti, Sinclair, and Yamaha; software, including the International Mathematical and Statistical Library (IMSL) and the Time Sharing Subsystem Library (TSS) with updates received regularly; FORTRAN and PASCAL compilers; 1986 generation DOS operating systems, added by the Computer Center staff. There are 12 computer labs, some in the Computer Center and some in the colleges. Computer labs are available for out-of-class use. Off-campus linkage to the mainframe is provided via modems.

Beginning with the 1986-87 academic year, all bachelor's degree students are required to take two years of computer science. BASIC is taught to all students during the first year. COBOL and FORTRAN are taught to second-year students in the College of Administration and Economics. FORTRAN is also taught to second-year students in all science-related colleges. PASCAL is taught to third-year and fourth-year students in the computer science, mathematics, and physics departments of the College of Education. All four languages are taught all four years to students in the Department of Computer Science of the College of Science. Classes are scheduled from 8:00 a.m. to 8:00 p.m., Saturday through Wednesday.

Higher Institute of Accountancy—This institute was also known as the High Institute of Accountancy, Higher Accountancy Institute, and Vocational Institute of Accountancy. It offered a 27-month program leading to a Diploma in Accountancy. In 1974, this institute was merged with the College of Administration and Economics, Mosul, an affiliate of the University of Al-Mustansiriyah, to form the College of Administration and Economics of the University of Mosul.

Institute for Testing and Engineering Consultation—Staffed by faculty members of the College of Engineering, it serves governmental agencies and the private sector. Because the faculty work with the institute in their spare time, they receive most of the money paid to the institute. No academic programs.

INSTITUTE OF FINE ARTS—Established in 1977, this preparatory-level institute was briefly attached to the University of Mosul. It is now under the jurisdiction of the Ministry of Education.

MEDICAL RESEARCH CENTER—This center is administered by the College of Medicine. No academic programs.

REMOTE SENSING CENTER—This center assists graduate students with nondestructive testing research projects, such as oil and water exploration. No academic programs.

RESEARCH CENTER FOR MANAGEMENT AND ECONOMICS. *See* Center for Management and Economic Research.

SCIENTIFIC RESEARCH CENTER—This center assists faculty members and graduate students with their research projects. No academic programs.

TURKISH STUDIES CENTER—No academic programs.

WOMEN'S COLLEGE—This college was established in 1967 and closed in 1971. It offered bachelor of arts degree programs in education and home economics.

UNIVERSITY OF QADISIYAH

The University of Qadisiyah was established in Diwaniyah (Qadisiyah Governorate) in 1988.

UNIVERSITY OF SALAHADDIN (JAMI'AT SALAHADDIN)

The University of Salahaddin was established in 1968 in Sulaimaniyah, a city of approximately 130,000 in northeastern Iraq, as the University of Sulaimaniyah. The first students graduated in 1972. In 1981, it was moved to Arbil, a city of approximately 250,000 in northeastern Iraq, and renamed the University of Salahaddin (also known as SALAHADDIN UNIVERSITY and as SALAHUDDIN UNIVERSITY). A new campus for 16,000 students, being designed by French architects, will be built south of Arbil. It is expected to open in 1997.

Salahaddin (also written as Salah Al-'Uddin, Salah Al-Deen, and Salah Al-Din) means "the one who makes the religion good." This name was given to an Iraqi warrior, Yusuf ibn-Ayyub, who lived from 1138 to 1193 A.D. Born in Tikrit, Mesopotamia (now Tikrit, Salah Al-Din Governorate, Iraq), he became the Sultan of Egypt. By 1186, he had united the Moslems against the Christian Crusaders. He is known to western historians as Saladin.

This university currently offers bachelor's and master's degree programs. Ph.D. degree programs will be added in the future. Two hours per week of Kurdish language are required in the first year of all bachelor's degree programs. Depending upon a student's prior knowledge, introductory or advanced courses are taken.

In 1970-71, there were 70 fulltime and 93 part-time teachers and 1,103 students (13.1% women). In 1978-79, there were 324 teachers and 5,253 students (22.2% women). In 1986-87, there were 644 teachers and 7,442 students (34.3% women). In 1986, the central library had 551 journals; 6,325 master's and doctoral theses; 523 manuscripts and rare books; and 650 scientific films. The number of volumes in 1970-71 totalled 35,000. In 1978-79, there were 100,000 volumes and in 1986-87, 100,111 volumes. There are also individual college libraries.

The University of Salahaddin has had the following divisions:

ACADEMY OF ARTS—This academy is being planned. It will offer degree programs in the fine arts.

COLLEGE OF ADMINISTRATION. *See* College of Administration and Economics.

COLLEGE OF ADMINISTRATION AND ECONOMICS—This college was established in 1972 as the DEPARTMENT OF ECONOMICS of the College of Arts. In 1975, it became the COLLEGE OF ADMINISTRATION (sometimes also known as the COLLEGE OF MANAGEMENT). In 1985, the name was changed to College of Administration and Economics. In 1986-87, it had 43 faculty members (37 men, 6 women) and 1,304 students (500 men, 804 women).

This college offers bachelor of arts degree programs in administration (with an optional specialization in accounting), economics, and statistics. The first students in administration and in statistics graduated in 1975; the first students in economics will graduate in 1989. Master of arts degree programs in administration and in economics are also offered, beginning with the 1987-88 academic year. A master of arts degree program in statistics is being planned, to begin during the 1988-89 academic year.

COLLEGE OF AGRICULTURE—This college was established in 1968. It offered bachelor of science degree programs in agricultural education, agricultural extension and cooperatives, agronomy, animal husbandry (with options in breeding or production), food technology, horticulture (with an option in plant production), and soil science. Since 1976, it has offered master of science degree programs in all of these fields except agricultural extension and cooperatives. In 1970-71, there were 24 fulltime and 27 part-time teachers, and 318 students (5.9% women). In 1986-87, there were 143 teachers, and 544 students (16.1% women). In 1987, this college was closed. The faculty members and students were transferred to the College of Agriculture of the University of Mosul (40 kilometers away) and to the College of Agriculture of the University of Baghdad.

COLLEGE OF ARTS—Established in 1971, this college has also been known as the COLLEGE OF LIBERAL ARTS, and as the COLLEGE OF LITERATURE. It offers bachelor of arts degree programs in Arabic language, English language (since 1985), geography, history (since 1986), Kurdish language, and sociology. Beginning in 1986-87, master of arts degree programs are offered in Arabic language, history, and Kurdish language; the first students will graduate in 1988. In 1981-82, this college had 33 faculty members. In 1986-87, it had 46 faculty members (43 men, 3 women) and 1,357 students (972 men, 385 women).

COLLEGE OF EDUCATION—This college was established in 1976 as a department within the College of Science. It became a separate college in 1982. It offers bachelor of arts degree programs in Arabic (since 1986) and psychology (since 1985), and bachelor of science degree programs in biology, chemistry, mathematics, and physics. Bachelor of arts degree programs in English, geography, and history are being planned. Graduates of this college teach in intermediate schools, preparatory schools, vocational schools, and primary teacher training institutes. In 1981-82, this college had 53 faculty members. In 1986-87, it had 133 faculty members (122 men, 11 women) and 1,142 students (727 men, 415 women).

College of Engineering—This college was established in 1968. It offers bachelor of science degree programs in civil engineering (beginning in 1968-69), electrical engineering (beginning in 1973-74), and mechanical engineering (beginning in 1987-88). A bachelor of science degree program in architectural engineering is being planned for 1988-89. The curriculum in electrical engineering is illustrated in Table 3.22.

For the 1986-87 academic year, the lowest preparatory baccalaureate score accepted for admission to the Department of Civil Engineering was 516. The lowest score accepted for admission to the Department of Electrical Engineering was 504.

Master of science degree programs have been offered in civil engineering since 1982-83 (first graduates in 1984). Approximately 30 students are admitted each year. Four options are offered: hydraulics engineering, soil mechanics and foundations, structural engineering, and transportation engineering. A master of science degree program in electrical engineering has been offered since 1976-77 (first graduates in 1978). It enrolls approximately nine students each year. A master of science degree program in mechanical engineering is being planned for 1991-92.

From 1978-79 to 1981-82, the Department of Civil Engineering offered one year of coursework leading to a Higher Diploma in Hydraulics or in Roads. Graduates with good grades could use this coursework to meet the course requirements of the master of science degree program.

The College of Engineering schedules classes Saturday through Wednesday. On Thursdays, it conducts field trips to companies and engineering projects.

In 1981-82, this college had 33 faculty members. In 1986-87, it had 55 faculty members (51 men, 4 women) and 839 students (650 men, 189 women).

College of Law—Established in 1985, this college offers a bachelor of arts degree program in law. In the future, the college may be expanded into a College of Law and Politics.

College of Liberal Arts. *See* College of Arts.

College of Literature. *See* College of Arts.

College of Management. *See* College of Administration and Economics.

College of Medicine—Established in 1977, this college offers a six-year program of study leading to the Bachelor of Medicine, Bachelor of Surgery (M.B.B.S.). It is planning to add higher diploma programs in gynecology and obstetrics (perhaps in 1987-88), internal medicine (perhaps in 1988-89), and surgery (perhaps in 1987-88), and an Iraqi Fellowship program in surgery (similar to the Royal College of Surgeons fellowship program in England). It is also planning a master of science degree program in medical microbiology

Table 3.22. Bachelor of Science Curriculum in Electrical Engineering 1983-87, College of Engineering, University of Salahaddin

Subject	U	L	A	P	Subject	U	L	A	P
First Year					**Third Year**				
Computer Science I	2	1	1	–	Communications Engineering I	5	2	1	–
Electrical Engineering Lab I	2	–	–	3	Electrical Engineering Lab III	4	–	–	6
Engineering Drawing & Descriptive Geometry	2	–	–	3	Electrical Machines II	5	2	1	–
Fundamentals of Electrical Engineering	5	2	1	–	Electrical Power I	4	2	–	–
Fundamentals of Mechanical Engineering	6	3	–	–	Eletromagnetic Fields	5	2	1	–
Kurdish Language	4	2	–	–	Electronics II	5	2	1	–
Materials Science	4	2	–	–	Engineering Analysis	6	2	2	–
Mathematics I	6	2	2	–	National & Socialist Culture III	4	2	–	–
National Socialist Culture I	4	2	–	–	Total	38	14	6	6
Total	35	14	4	6	**Fourth Year**				
Second Year					Communications Engineering II	5	2	1	–
Computer Science II	2	1	1	–	Control Engineering	5	2	1	–
Electrical Circuits	6	2	2	–	Electrical Engineering Lab IV	4	–	–	6
Electrical Engineering Lab II	2	–	–	3	Electrical Machines III	5	2	1	–
Electrical Machines I	4	2	–	–	Electrical Power II	5	2	1	–
Electrical Measurements	4	2	–	–	Electronics III	4	2	–	–
Electronics I	5	2	1	–	National & Socialist Culture IV	4	2	–	–
Mathematics II	6	2	2	–	Project	2	–	3	–
National & Socialist Culture II	4	2	–	–	Total	34	12	7	6
Programming & Logic	4	2	–	–					
Total	37	15	6	3					

U = Unit, L = Lecture, A = Application, P = Practice.

NOTE: Computer Science I was added to the curriculum in 1986-87; Computer Science II was added in 1987-88. Mathematics I includes calculus, complex variables, differential equations, numerical analysis, and statistics.

(perhaps in 1988-89). In 1986-87, this college had 50 faculty members and 609 students. It has three major and two minor teaching hospitals.

COLLEGE OF PHARMACY—This college may be established in 1989 or 1990. It will offer a five-year bachelor of science degree program in pharmacy.

COLLEGE OF SCIENCE—Established in 1968, this college offers bachelor of science degree programs in biology (options in biology and microbiology), chemistry, computer science (since 1987-88), geology, mathematics, and physics. In earlier years the biology option was further divided into botany and zoology. Master of science degree programs are offered in biology, chemistry, geology (since 1986-87), mathematics, and physics. A program in computer science may be added in the future.

In 1970-71, this college had 22 fulltime, 55 part-time, and 15 foreign faculty members, and 783 students (657 men, 126 women). In 1986-87, it had 169 faculty members (153 men, 16 women) and 1,299 students (854 men, 445 women).

UNIVERSITY OF SULAIMANIYAH (JAMI'AT AL-SULAIMANIYAH)

The University of Sulaimaniyah (also known as SULAIMANIYAH UNIVERSITY) was established in Sulaimaniyah in northeastern Iraq in 1968. The first degrees were awarded in 1972. In 1981, the university was moved to Arbil (also in northeastern Iraq) and renamed the UNIVERSITY OF SALAHADDIN.

The bachelor of science curricula in biology and in electrical engineering are illustrated in Tables 3.23 and 3.24, respectively.

Table 3.23. Bachelor of Science Curriculum in Biology, 1969-73, College of Science, University of Sulaimaniyah

Subject	Cr	Lec	Lab	Subject	Cr	Lec	Lab
First Year				**Second Year**			
Botany	3½	2	3	Bacteriology	3½	2	3
General Chemistry	5½	4	3	Histology & Embryology	3½	2	3
General Mathematics	4	4	–	Invertebrates	3½	2	3
General Physics	4½	3	3	Lower Plants	3½	2	3
General Zoology	3½	2	3	Organic Chemistry	3½	3	3
Total	21	15	12	Plant Taxonomy	3½	2	3
				Total	21	13	18
Third Year				**Fourth Year**			
Biochemistry	4½	3	3	Applied Microbiology	3	2	3
Cytology	3¾	2	3	Biostatistics	2	2	–
Ecology	1¾	2	3	Comparative Anatomy	3	2	3
Entomology	3½	2	3	Economic & Medical Entomology	3	2	3
Parasitology	3½	2	3	Fauna	3	2	3
Physiology	3½	2	3	General Ecology	3	2	3
Total	20½	13	18	Heredity	2	2	–
				Microtechniques	3	–	3
				Seminar	1	1	–
				Virology	3	2	3
				Total	26	17	21

Cr = Credits, Lec = Lecture, Lab = Laboratory.

Table 3.24. Bachelor of Science Curriculum in Electrical Engineering, 1973-77, College of Engineering, University of Sulaimaniyah

Subject	Units	Subject	Units
First Year		**Second Year**	
Chemistry	6	Electrical Circuits	8
Engineering Descriptive Drawing	4	Electrical Engineering Lab	2
Engineering Drawing	3	Electrical Machines	6
English Language	4	Electrical Measurement	2
Kurdish Language	4	Electromagnetic Fields	6
Mathematics I	10	Electronics I	6
Physical Education	–	Installations	1
Physics	10	Mathematics II	8
Workshop	1	Mechanical Engineering	4
Total	42	Mechanical Engineering Lab	2
		Mechanics	4
		Society of Iraq	2
		Total	51
Third Year		**Fourth Year**	
Communication I	7	Communication II	8
Economy & Planning	3	Computer Science	4½
Electronics II	7	Control Engineering	4½
Machines	5	Electronic Measurement	2
Mathematics III	6	Electronics III	8
Numerical Analysis & Programming	5	Microwave Techniques	4½
Power	7	Project	4
Total	40	Propagation & Antennas	2
		TV Techniques	4½
		Total	42

In 1970-71, there were 70 fulltime and 93 part-time teachers, and 1,103 students (13.1% women). In 1972-73, there were 108 teachers and 2,039 students (21.7% women). In 1981-82, there were 462 teachers and 6,040 students (28.3% women).

The number of volumes in the central library in 1970-71 totalled 35,000; in 1981-82, the number of volumes totalled 100,000. In addition to the central library, there were individual college libraries.

UNIVERSITY OF TECHNOLOGY (AL-JAMI'AT AL-TECHNOLOGIA)

The HIGHER TECHNICAL INSTITUTE was established in 1960, with assistance from UNESCO and West Germany. It offered five-year bachelor's degree programs in technology and in technical education. Admission required the preparatory baccalaureate, scientific section, or the vocational baccalaureate, industrial section. This institute was also known as the COLLEGE OF ENGI-

NEERING TECHNOLOGY, HIGH TECHNICAL INSTITUTE, HIGHER INDUSTRIAL INSTITUTE, and INSTITUTE OF TECHNOLOGY. In 1965, the name was changed to the COLLEGE OF INDUSTRIAL ENGINEERING (also translated as INDUSTRIAL COLLEGE). In 1969, this college was merged with the Engineering Science Department of Al-Hikma University of Baghdad to form the COLLEGE OF INDUSTRIAL ENGINEERING of the University of Baghdad. At that time, the curricula in technology were terminated and the college offered only the programs in technical education. In 1970, the name was changed back to the COLLEGE OF ENGINEERING TECHNOLOGY (also known as the COLLEGE OF TECHNOLOGY ENGINEERING), and the curricula in technology were restored. In 1975, this college was merged with the College of Technology of the University of Al-Mustansiriyah to create the University of Technology, sometimes translated as TECHNICAL UNIVERSITY or TECHNOLOGICAL UNIVERSITY. It is located in Baghdad.

The University of Technology has two academic missions: to train engineers, and to train technical teachers for the industrial vocational schools and the technical institutes. The university has offered the following programs:

1. Two-year programs leading to a Diploma of Technician (also called Technical Diploma), offered from 1976 to 1983. They included theoretical knowledge and the practical training needed for employment as technical assistants, draftsmen, etc. Graduates were employed by the University of Technology and by other universities. They were eligible to enroll in a special two-year bachelor of science degree program offered by the University of Technology. This program offered technology options in control, engineering drawing, mechanics, production, soil and construction materials testing, and textiles. The curriculum in mechanics is illustrated in Table 3.25.

   Students may divide a four-year bachelor of science degree program into two two-year cycles, separated by at least one year of supervised work experience. Few students choose this option. Those who do receive a Diploma of Technician (also known as Technical Diploma) upon completion of the first cycle.

   An 18-month intensive program in radar was formerly offered at the request of the Ministry of Defense. It led to a Diploma of Technician in Radar. This program is now offered by the Institute for Radar Technicians, a specialized institution operated by the Ministry of Defense.

2. Two-year programs leading to a Bachelor of Science in Engineering Technology (no longer offered). Admission required a Diploma of Technician from the University of Technology, or a three-year diploma from the Higher Institute of Industrial Engineering of the University of Baghdad, plus at least three years of work experience. The curriculum in machines engineering is illustrated in Table 3.26.

3. Four-year bachelor of science degree programs, offered since 1975 by each of 10 departments: applied science (mathematics and physics), architectural engineering, building and construction engineering, chemical engineering, computer science (only since 1986-87), control and systems engineering,

Table 3.25. Diploma of Technician Curriculum in Mechanics, 1976-78, Department of Mechanical Engineering, University of Technology

Subject	Units	Subject	Units
First Year		**Second Year**	
Electricity	3	Creation of Energy	4
English Language	2	Energy Transportation	3
General Culture	2	Industrial Organization	3
General Technology	3	Inspection & Maintenance	2
Heat Energy	2	Laboratories	3
Laboratories	3	Mechanical Drawing & Design	2
Mathematics	3	Workshop Technology	3
Mechanical Drawing	3	Workshops II	3
Mechanics	3	Total	23
Workshops I	3		
Total	27		

Table 3.26. Bachelor of Science in Engineering Technology, Machines Engineering Curriculum, 1980-82, Department of Mechanical Engineering, University of Technology

Subject	Units	Subject	Units
First Year		**Second Year**	
Dynamics of Machines	6	Air Conditioning & Refrigeration	6
Engineering Economics	3	Automatic Control	3
Engineering Mathematics	8	Industrial Management & Quality Control	4
Fluid Mechanics	6	Internal Combustion Engines	8
Heat Transfer	6	Laboratories II	6
Laboratories I	8	Nationalist & Socialist Education II	4
Machine Design	10	Power Plants	6
Nationalist & Socialist Education I	4	Project	9
Technical English Language	2	Turbomachinery & Gas Dynamics	8
Thermodynamics	6	Total	54
Total	59		

electrical engineering, mechanical engineering, production and materials engineering (also known as production engineering and metallurgy), and technical education. Admission usually requires a score of 450 or higher on the preparatory baccalaureate examination, scientific section.

Each bachelor of science degree program requires a high level of practical experience through laboratory training and workshops designed to stress familiarity with machinery and materials. Students thereby develop confidence in their ability to handle practical assignments. From 1975 to 1980, nine hours per week of workshops were required in the first year of each degree program. During the four-year program, each student was required to complete eight units in workshop, including at least one unit in each of four types: automotive, carpentry, sheet metal, and welding. The remaining four units were usually completed in one of the four types.

Since 1980, six hours per week of workshops have been required during the first year of each degree program. Additional workshops are required during the second and third years of the production and materials engineering program and during the third year of the mechanical engineering program. All programs require completion of six-week periods of industrial training during the summer after the second and third years.

4. A one-year higher diploma program in architecture (discontinued in 1983). Preference was given to applicants who had had at least two years of employment experience after receiving a bachelor of science degree in architectural engineering. Ten percent of those who received the higher diploma were admitted to the master of science degree program in architecture (usually those with a grade average of 80% or higher). Their higher diploma coursework became part of the master's degree program. The curriculum for this higher diploma was approximately 80% research, specializing in applied architecture (administrative buildings, hospitals, theaters, etc.).

5. One-year higher diploma (sometimes called postgraduate diploma) programs in various engineering fields (discontinued in 1983). Admission required a grade average of 65% or higher in the bachelor of science degree program, which meant a class rank in approximately the top 25%. Graduates with good grades were admitted to master of science degree programs. Their higher diploma coursework became part of the master's degree program.

6. Higher diploma programs in control and systems engineering (discontinued in 1983). This program required two to three years of study. Graduates with good grades were admitted to master of science degree programs. Their higher diploma coursework became part of the master's degree program, and they generally needed one year in which to complete a thesis. The curriculum in computer hardware is illustrated in Table 3.27.

7. Two-year master of science degree programs, offered by 10 departments. Total enrollment in 1986 was 150. The curriculum in electronics engineering is illustrated in Table 3.28.

8. Three-year doctor of philosophy degree programs in building and construction engineering, chemical engineering, and electrical engineering, (beginning in 1987-88). Two students will be admitted to each program each year. A doctoral program in mechanical engineering is planned for 1988-89. Doctoral programs in other fields are being planned for the future.

9. Joint applied research with industry, coordinated by the university's engineering consulting office. Faculty members are permitted one to two days of consulting per week.

Table 3.27. Higher Diploma Curriculum in Computer Hardware, 1976-78, Department of Control and Systems Engineering, University of Technology

Subject	Units	Subject	Units
First Year		**Second Year**	
Assembler Languages	2	Applications for Computers	1
Data Transmission	2	Digital Lab & Computer Lab	1
Digital Laboratory	1	Fault Finding Reliability	2
Digital Techniques	2	Multiprocessor Techniques	2
Introduction to Computers	2	Organization & Hardware	2
Operating Systems	2	Projects	2
Peripheral Devices	2	Specialized Processors	2
Total	13	Total	12

Table 3.28. Master of Science Curriculum in Electronics Engineering, 1986-88, Department of Electrical Engineering, University of Technology

Subject	U	T	L	Subject	U	T	L
First Year, First Term				**First Year, Second Term**			
Advanced Mathematics	3	3	–	Active Filter Design	2	2	–
Electronic Circuit Design	3	2	2	Elective	2	2	–
Electronic Instrumentation	2	2	–	I. C. Layout Design	2	2	–
Microprocessor Architecture	2	2	–	Microprocessor Engineering	2	2	2
Signal Processing	2	2	–	Network Synthesis	2	2	–
				Technical Education	0	2	–
Totals	10	12	2	Totals	12	11	2
Second Year							
Thesis							

U = Unit, T = Theory, L = Laboratory.

The University of Technology uses the standard grading scale. Grades are generally distributed as follows:

Grading Scale		Approximate % of Students
90-100	excellent	0
80-89	very good	4
70-79	good	12
60-69	medium	25
50-59	pass	42
0-49	fail	17

If a student in any program fails an examination on two consecutive attempts, enrollment at the university is terminated. In some programs, professors tend to grade even more severely than the general distribution pattern noted above would indicate. For example, it is not at all unusual for the best student in civil engineering to receive a grade of 72.

The university admitted 1,005 new students in 1974-75; 1,472 in 1984-85; and 2,000 in 1986-87. In 1977-78, there were 6,240 students and 150 fulltime and 150 part-time teachers. In 1986-87, there were an estimated 8,000 students and approximately 350 teachers. In 1981-82, the library had 35,000 volumes; in 1986-87, this count rose to an estimated 60,000 volumes. In addition to the central library, there are individual departmental libraries.

The University of Technology has had the following divisions:

CENTER FOR CONTINUING EDUCATION—Also known as the CENTER FOR LIFELONG EDUCATION, this center was established in 1975. It offers non-credit continuing education courses which enroll approximately 3,000 engineers and technicians each year. Approximately 100 courses are offered, each one to two weeks long.

CENTER FOR ELECTRONIC DEVELOPMENT AND RESEARCH—Provides research assistance for the light electrical industry.

COMPUTER CENTER—This center was established in 1975 as part of the Department of Control and Systems Technology to provide computer assistance to faculty and to governmental agencies. In 1984, it became the DEPARTMENT OF COMPUTER SCIENCE.

DEPARTMENT OF AERONAUTICAL ENGINEERING—Established in 1976, this department was absorbed by the Department of Mechanical Engineering at the end of the 1982-83 academic year. It may be re-established as a separate department in the future.

DEPARTMENT OF APPLIED SCIENCES—Established in 1977, this department offers courses in mathematics and physics for students enrolled in other fields. It also offers bachelor of science degree programs in applied mathematics (since 1986-87) and applied physics (since 1987-88), and a master of science degree program in applied physics (since 1984-85). A master of science degree program in applied mathematics is being planned.

From 1977-78 to 1983-84, this department offered a one-year program leading to the Higher Diploma in Applied Physics. Admission required a bachelor of science degree in physics. During the early 1980s, it offered courses in computer science for students enrolled in other fields, a service previously provided by the Department of Control and Systems Technology. Beginning in 1983-84, it also offered a bachelor of science degree program in computer science. The courses in computer science were transferred to a new Department of Computer Science in 1984; the degree program was transferred in 1986.

DEPARTMENT OF ARCHITECTURE—Established in 1975, this department offers a five-year bachelor of science degree program in architectural engineering. Prior to 1977, the bachelor's degree program led to a degree in architecture. In that year, the name of the degree was changed to architectural engineering so that the graduates would be eligible to join the Iraqi Society of Engineers.

By U.S. criteria, the curriculum is still *architecture*, not *architectural engineering*. The department also offers a two-year master of science degree program in architecture (since 1985-86). Prior to 1983, it also offered a one-year post-bachelor's program leading to a Higher Diploma in Architecture.

DEPARTMENT OF BUILDING AND CONSTRUCTION ENGINEERING—Established in 1961 as part of a predecessor institution, this department has also been known as the DEPARTMENT OF CONSTRUCTION ENGINEERING and as the DEPARTMENT OF CIVIL ENGINEERING. It has offered a bachelor of science degree program in building and construction engineering since 1975, and a master of science degree program in building and construction engineering since 1976. This department has 47 faculty members and approximately 50 master's degree students.

The bachelor's degree program has options in construction methods, environment, structural design, and water resources. The master's degree program has options in concrete technology, geotechnics (rock mechanics and soil mechanics), structures (since 1987-88), and water resources. The option in structures is also known as construction management. A master's degree program in quantity surveying is being planned.

DEPARTMENT OF CHEMICAL ENGINEERING—This department was established in 1975. It offers bachelor of science degree programs (since 1975-76), master of science degree programs (since 1980-81), and a doctor of philosophy (Ph.D.) degree program (since 1987-88).

DEPARTMENT OF CIVIL ENGINEERING. *See* Department of Building and Construction Engineering.

DEPARTMENT OF COMPUTER SCIENCE—This department was established in 1984 by a reorganization of the Computer Center. It offers computer science courses for students enrolled in other degree programs, a service previously offered by the Computer Center (then part of the Department of Control and Systems Technology) and later by the Department of Applied Sciences. Beginning in 1986-87, this department offers a bachelor of science degree program in computer science that had been offered by the Department of Applied Sciences since 1983-84. It also assists the National Computer Center in the administration of the center's master of science degree program in computer science.

DEPARTMENT OF CONSTRUCTION ENGINEERING. *See* Department of Building and Construction Engineering.

DEPARTMENT OF CONTROL AND SYSTEMS TECHNOLOGY—Established in 1975, and also known as the DEPARTMENT OF SYSTEMS AND CONTROL TECHNOLOGY, this department offers bachelor of science and master of science degree programs in control and systems technology. Until 1983, it offered a higher diploma program in control and systems technology which required two to three years of study. The Computer Center (now the Department of Computer Science) was originally part of this department. It offered courses in computer science to students enrolled in other programs until this responsibility was transferred to the Department of Applied Sciences in the early 1980s.

DEPARTMENT OF EDUCATIONAL TECHNOLOGY. *See* Department of Technical Education.

DEPARTMENT OF ELECTRICAL ENGINEERING—This department was established in 1961 as part of a predecessor institution. It offers bachelor of science degree programs (since 1975-76) with options in power (heavy current) and electronics and communications (light current), a master of science degree program (since 1976-77), and a doctor of philosophy (Ph.D.) degree program (since 1987-88).

DEPARTMENT OF INDUSTRIAL EDUCATION. *See* Department of Technical Education.

DEPARTMENT OF INDUSTRIAL MANAGEMENT—This department is being planned. It will offer a bachelor of science degree program in industrial management/operations research. Approximately 20%-30% of the curriculum will involve engineering courses that will distinguish this program from bachelor's degree programs in management offered by colleges of administration and economics at other universities.

DEPARTMENT OF INDUSTRIAL TEACHERS. *See* Department of Technical Education.

DEPARTMENT OF MACHINE AND EQUIPMENT TECHNOLOGY. *See* Department of Mechanical Engineering.

DEPARTMENT OF MACHINERY AND EQUIPMENT. *See* Department of Mechanical Engineering.

DEPARTMENT OF MACHINES AND TOOLS. *See* Department of Mechanical Engineering.

DEPARTMENT OF MATERIALS SCIENCE—This department is being planned. It will offer a bachelor's degree program.

DEPARTMENT OF MECHANICAL ENGINEERING—This department was established in 1961 as part of a predecessor institution. It has also been known as the DEPARTMENT OF MACHINE AND EQUIPMENT TECHNOLOGY, DEPARTMENT OF MACHINERY AND EQUIPMENT, and DEPARTMENT OF MACHINES AND TOOLS. This department has offered a bachelor of science degree program (since 1975-76). In 1986-87, options were offered in aeronautical engineering, automotive engineering, and mechanical engineering (including air conditioning and refrigeration). A master of science degree program has been offered since 1976-77. A doctor of philosophy (Ph.D.) degree program is being planned for 1988-89.

DEPARTMENT OF PHYSICAL EDUCATION—This department was established in 1986 to offer the physical education courses which are required of all bachelor's degree students.

DEPARTMENT OF PRODUCTION ENGINEERING AND METALLURGICAL ENGINEERING. *See* Department of Production Engineering and Metallurgy.

DEPARTMENT OF PRODUCTION ENGINEERING AND METALLURGY—This department was established in 1976. It has also been known as the DEPARTMENT OF PRODUCTION ENGINEERING AND METALLURGICAL ENGINEERING and as the DEPARTMENT OF PRODUCTION TECHNOLOGY. It offers a bachelor of science degree program with options in metallurgy and in production engineering, and a master of science degree program.

DEPARTMENT OF PRODUCTION TECHNOLOGY. *See* Department of Production Engineering and Metallurgy.

Department of Robotics—This department is being planned. It will offer a bachelor of science degree program.

Department of Systems and Control Technology. *See* Department of Control and Systems Technology.

Department of Technical Education—This department was established in 1975 by a merger of education programs offered by various other departments of the predecessor institutions of the University of Technology. It has also been known as the Department of Educational Technology, Department of Industrial Education, and the Department of Industrial Teachers. The mission of this department is to train technical teachers for the preparatory-level industrial vocational schools and for the post-preparatory technical institutes. It offers bachelor of science and master of science degree programs in technical education, with options in building and construction, electrical engineering, and mechanical engineering. It is the only department of the university which routinely admits graduates of industrial vocational schools.

UNIVERSITY OF TIKRIT

The University of Tikrit was established in Tikrit (Salah Al-Din Governorate) in 1988.

IV. Institutions Supervised by Other Ministries

In addition to the Ministry of Education (discussed in chapter II) and the Ministry of Higher Education and Scientific Research (discussed in chapter III), 17 other ministries plus one ministry-level agency each have responsibility for a portion of the educational system. They are the Ministries of Agriculture and Agrarian Reform, Awqaf and Religious Affairs, Culture and Information, Defense, Foreign Affairs, Health, Heavy Industries, Interior, Justice, Labor and Social Affairs, Light Industries, Local Government, Oil and Minerals, Planning, Trade, Transportation and Communication, and Youth, and the State Organization for Tourism (a ministry-level governmental agency).

Each of these agencies administers one or more specialized preparatory-level or tertiary-level institutions or programs. The Foundation for Vocational Education of the Ministry of Education coordinates the supervision of curricula, examinations, and teachers for the preparatory-level institutions and programs. The Foundation of Technical Institutes of the Ministry of Higher Education and Scientific Research does the same for the tertiary-level institutions and programs.

These institutions award certificates, diplomas, bachelor's degrees, higher diplomas, or master's degrees. In Iraq, the certificates are considered the equivalent of a vocational baccalaureate, the diplomas the equivalent of a diploma of technician awarded by a technical institute, and the bachelor's degrees and master's degrees the equivalent of the same degrees awarded by a university. The higher diplomas are considered equivalent to higher diplomas awarded by a university.

A. Ministry of Agriculture and Agrarian Reform

AGRICULTURAL EXTENSION AND TRAINING DEPARTMENT

No information is available.

INSTITUTE OF ANIMAL HEALTH

Established in Baghdad in 1960, this institute is administered by the Directorate General of Veterinary Services of the Ministry of Agriculture and Agrarian Reform. In 1971-72, it had 7 fulltime and 3 part-time faculty members and 700 students (all men).

The institute offers a three-year program leading to a Certificate of Practical Veterinarian. Admission is based upon the intermediate baccalaureate plus an examination in botany, physics, and zoology. The curriculum includes the following subjects: *First Year*—anatomy I, animal management, animal production, clinic I, farriery, management, nutrition, pharmacology I, physiology I, and poultry I. This year is followed by two months of practical training.

Second Year—anatomy II, clinic II, infectious diseases I, meat inspection, medicine, microbiology I, parasitology, pharmacology II, physiology II, and surgery I. This year is followed by two months of practical training. *Third Year*—breeding, clinic III, forensic medicine, infectious diseases II, management, microbiology II, pharmacology III, poultry II, and surgery II.

In addition, the institute also offers a two-year program leading to a Diploma in Veterinary Sciences. Admission is based upon the preparatory baccalaureate, scientific section, or the vocational baccalaureate, agricultural or veterinary section, plus an examination in botany, physics, and zoology. Graduates with good grades may enroll in a college of veterinary medicine and surgery. The curriculum includes the following subjects: *First Year*—anatomy, animal management I, animal production, microbiology I, nutrition, parasitology, pharmacology I, physiology I, poultry I, and surgery I. This year is followed by two months of practical training. *Second Year*—animal management II, breeding, clinic, forensic medicine, meat inspection, microbiology II, pharmacology II, physiology II, poultry II, and surgery II.

SCHOOL OF AGRICULTURE

Established in 1927, this school was transferred to the Ministry of Education in 1929, transferred back again in 1931, and then closed. It was reopened in 1937 by the Ministry of Education, later transferred to the Ministry of Economics, and in 1947 transferred back to the Ministry of Agriculture and Agrarian Reform. It formerly offered a two-year fulltime post-intermediate school vocational program, similar to the three-year program now offered by the agricultural vocational schools (see chapter II, section E). It now offers only short-term, non-credit, in-service training courses.

B. Ministry of Awqaf and Religious Affairs

This ministry is sometimes referred to as the Ministry of Awqaf. *Awqaf* is the plural of *waqf*. A *waqf* is an endowment of property or money which is held in trust for charitable and religious causes. The income from the endowment is distributed according to Islamic law. The primary responsibilities of this ministry are to supervise the administration of *awqaf*, to coordinate the construction and maintenance of mosques and religious schools, and to appoint *qadis* and *khatibs* (see below for definitions) and other Islamic religious officials. If not appointed by the Ministry, Islamic religious officials are persons who have had some religious education or (in small towns and villages) who have a religious inclination. The nine types of Islamic religious officials in Iraq are as follows:

1. *'Alim* (pl. *'ulama*). A religious scholar.
2. *Faqih*. An expert in the established *Shari'a*.
3. *Imam*. An Islamic prayer leader.

4. *Khatib*. One who gives a *khutba* (sermon) in a Shi'ite mosque during Friday prayers.
5. *Mu'adhdhan* (also *muezzin*). One who delivers the call to prayer from the minaret of a mosque.
6. *Mufti*. An expert in *Shari'a*, competent to give a *fatwa* (legal opinion) on matters not covered in Islamic law books.
7. *Mujtahid*. A scholar in *Shari'a*, competent to give interpretations.
8. *Mulla*. A religious scholar.
9. *Qadi*. A judge who administers the *Shari'a* and issues decisions in specific cases.

In the Sunni Islamic tradition, religious learning is passed to succeeding generations via informal training in a mosque. There are no formal Sunni Islamic schools. In the Shi'ite Islamic tradition, religious learning is passed to succeeding generations by specially trained religious teachers. Shi'ite religious leaders prepare for their roles by formal study at religious schools. All religious schools in Iraq are related to the Shi'ite Islamic tradition.

Formerly, there were four independent tertiary-level religious schools in Iraq: Al-Imam Al-A'dham College, Al-Najaf University, Islamic Studies Religious College, and Osool Al-Deen Religious College (see chapter III, section F). Now only the College of Al-Shari'a of the University of Baghdad and the College of Islamic Studies of the University of Al-Mustansiriyah offer tertiary-level degree programs. They are supervised jointly by the Ministry of Awqaf and Religious Affairs and the Ministry of Higher Education and Scientific Research.

C. Ministry of Culture and Information

BROADCASTING TRAINING INSTITUTE

Located in Baghdad, this institute has also been known as the RADIO AND TELEVISION TRAINING INSTITUTE. It offers a three-year diploma program in radio and television. Admission is based upon the preparatory baccalaureate, scientific section, or the vocational baccalaureate, industrial section.

INSTITUTE OF ANTIQUITIES

Located in Baghdad, this institute has also been known as the INSTITUTE OF ARCHAEOLOGY.

INSTITUTE OF ARABIAN MUSIC. No information is available.

INSTITUTE OF MELODIC STUDIES

Established in Baghdad in 1971, this institute has also been known as the INSTITUTE OF IRAQI TONAL STUDIES, INTERNATIONAL CENTER FOR

TRADITIONAL MUSIC STUDIES, MELODIC STUDIES INSTITUTE, and TONAL STUDIES INSTITUTE.

It offers a six-year diploma in art program: three years of general study and three years of specialized research and study of traditional Iraqi instruments and music (*maqam*). Admission is based upon the intermediate baccalaureate plus an audition. The first students graduated in 1977. They are prepared to be musicians, not teachers of music, and are employed by radio and televison stations. In 1986-87, 10 new students were admitted (8 boys and 2 girls).

This institute also offers non-credit continuing education courses to train musicians on traditional musical instruments. The following instruments are studied in both the diploma and non-credit programs:

buzug. A fretted lute with metal strings; not currently included in either program.
dafrug. A tambourine.
jawzah (also *djoze*; *joza*). A four-stringed fiddle.
nay. A flute or fife without a mouthpiece.
qanun. A stringed instrument, similar to the zither.
santur. Similar to a dulcimer.
tabla. A drum, similar to a tom-tom.
ud (also *oud*). A lute.

MUSICAL INSTRUMENTS WORKSHOP

Established in Baghdad in 1975, this workshop offers a one-year to two-year trainee program for adults who are interested in making and repairing folk musical instruments: *jawzah* (since 1980), *qanun* (since 1978), *santur* (since 1980), and *ud* (since 1975). Admission requires at least a primary school certificate (completion of six years of education). Some of the trainees are university graduates.

Some workshop graduates are self-employed, while others are employed by the workshop to make instruments. In 1986-87, there were 14 trainees and instrument makers. From 1975 through 1986, 40 persons have graduated from the trainee program.

REGIONAL CENTER FOR CONSERVATION OF CULTURAL PROPERTY

This center offers short-term, non-credit, pre-service and in-service training courses in the conservation and restoration of buildings and artifacts. Admission requires a bachelor of science degree in archaeology, architectural engineering, chemistry, civil engineering, or physics.

SCHOOL OF MUSIC AND BALLET

Located in Baghdad, this coeducational school is also known as the IRAQI MUSIC AND BALLET SCHOOL. It offers the same curriculum as other primary, intermediate, and preparatory schools, plus intensive music and ballet courses designed to train talented children as professional performers. It is administered by the Ministry of Culture and Information in cooperation with the Ministry of Education. Graduates receive a preparatory baccalaureate, literary section.

D. Ministry of Defense

AIR FORCE COLLEGE

Located near Basrah in southern Iraq, this college was established in 1950 by a reorganization of an aviation school established in 1933. Also known as the AIR FORCE ACADEMY and AIR FORCE FLYING SCHOOL, it offers a four-year bachelor of science degree program comprised of three years of coursework and one year of field training. Admission requires a preparatory baccalaureate, scientific section, or vocational baccalaureate, industrial section.

AIR FORCE INSTITUTE

Located in Baghdad, this institute offers a two-year program leading to a Certificate of Lower Technician. Admission is based upon the intermediate baccalaureate. (Note: Army and navy lower technicians are trained in industrial vocational schools.)

INSTITUTE FOR AIR CRAFT MECHANICS

Located in Baghdad, this institute offers a three-year diploma of technician program comprised of two years of coursework and one year of supervised practical training. Admission requires a preparatory baccalaureate, scientific section, or a vocational baccalaureate, industrial section.

INSTITUTE FOR AIR FORCE TECHNICIANS

Located in Baghdad, this institute offers a three-year diploma of technician program comprised of two years of coursework and one year of supervised practical training. Admission requires a preparatory baccalaureate, scientific section, or a vocational baccalaureate, industrial section.

INSTITUTE FOR RADAR TECHNICIANS

Located in Baghdad, this institute offers a three-year diploma of technician program comprised of two years of coursework and one year of supervised practical training. Admission requires a preparatory baccalaureate, scientific section, or a vocational baccalaureate, industrial section.

MILITARY SCHOOL OF NURSING

Established in 1984, this coeducational school had 120 students in 1985-86.

MILITARY TECHNICAL INSTITUTE

Located in Baghdad, this institute is also known as the MILITARY COLLEGE OF TECHNOLOGY and as the MILITARY TECHNICAL COLLEGE. It offers programs in computer science, electrical engineering, electronics, general science, mechanical engineering, and military science.

NAVAL COLLEGE

Located in Um Qasr in southern Iraq, this college is also known as the NAVAL ACADEMY. It offers a four-year bachelor of science degree program in marine science. Two academic years are spent at the college, followed by 18 months of training on a ship and then one more academic year at the college. Admission requires a preparatory baccalaureate, scientific section, or a vocational baccalaureate, industrial section.

UNIVERSITY OF AL-BAKR

Established in Baghdad in 1976 as the AL-BAKR ACADEMY, this university was named for a former president of Iraq. The current name was adopted in the 1980s. It is also known as the AL-BAKR COLLEGE and as the AL-BAKR UNIVERSITY FOR HIGHER MILITARY STUDIES. It has six divisions which previously existed as separate institutions:

ARMY COLLEGE—Established in 1924 in Al-Rustamiyah (Baghdad Governorate), this college is also known as the ARMY ACADEMY, MILITARY ACADEMY, and MILITARY COLLEGE. It offers a four-year bachelor of science degree program comprised of three years of coursework (two years of general studies, one year of specialized study for combatant or administrative staff) and one year of field training. Admission requires a preparatory baccalaureate, scientific section, or vocational baccalaureate, industrial section. Graduates receive a commission in the army as a second lieutenant.

MILITARY COLLEGE OF MEDICINE—Established in Baghdad in 1983, this college offers a six-year program of study leading to the degree of Bachelor of Medicine, Bachelor of Surgery (M.B.B.S.). Graduates are required to complete at least 15 years of service in the military. This college will offer master of science degree programs in the future.

NATIONAL DEFENSE COLLEGE—No information is available.

RESERVE COLLEGE—Established in Baghdad in 1952, this college offers two one-year programs. One admits preparatory school graduates and leads to the rank of warrant officer in the army. The other admits university graduates (e.g., in medicine or pharmacy) and leads to a commission as a second lieutenant in the army.

STAFF COLLEGE—Established in Al-Rustamiyah (Baghdad Governorate) in 1928, this college offers a two-year graduate program which trains air force and army officers for high command.

WAR COLLEGE—No information is available.

E. Ministry of Foreign Affairs

FOREIGN SERVICE INSTITUTE

Located in Baghdad, this institute is also known as the INSTITUTE OF FOREIGN SERVICES. It offers a two-year program of study leading to a higher diploma. Admission is based upon a bachelor of arts degree. This institute also offers a one-year in-service training program which does not lead to a diploma. Admission requires the institute's higher diploma.

F. Ministry of Health

HIGHER INSTITUTE OF PARAMEDICAL PROFESSIONS

This institute is also known as the HIGHER INSTITUTE FOR MEDICAL PROFESSIONS, HIGHER INSTITUTE OF HEALTH PROFESSIONS, and PARAMEDICAL PROFESSIONS HIGHER INSTITUTE. It was established in Baghdad in 1972 by a merger of existing health-related schools, including a paramedical school (1930), a school for health officials (1932), and a nursing school (1933), all originally subdivisions of the College of Medicine of the University of Baghdad. It now has branches in Baghdad and Mosul. This institute offers three types of programs:

1. Post-intermediate school diploma programs in health sciences, laboratory analysis, and sanitation. Each program requires two calendar years (considered the equivalent of three academic years). Admission is based upon the intermediate baccalaureate. Approximately 400 students complete these programs each year. These programs include courses such as anatomy and physiology, bacteriology and parasitology, environmental sanitation, first aid, hematology, medicine, pathology, pharmacology, public health, sanitary engineering, statistics, and surgery. Each program involves 50% theory, 25% laboratory work, and 25% practical training.
2. Post-intermediate school diploma programs to train health officials and medical clinic assistants. Each program requires five calendar years. Graduates staff dispensaries, assist in surgical wards, and work in villages where there are no physicians.
3. Post-preparatory school higher diploma programs in 14 allied health fields, including anesthesiology, dietetics, health research, hematology, lab technology, medical clinic assisting, nursing (professional nurse), occupational therapy, optician, pharmacy assisting, physiotherapy, preventive medicine assisting, public health, public health dentistry, and radiology. Admission is based upon the preparatory baccalaureate, scientific section. Each program requires two calendar years (considered the equivalent of three academic years). There were 2,000 graduates from these programs in 1986. Those who graduate in the top 10% of their class can continue their education at a university.

HIGHER NURSING SCHOOLS

These schools offer a three-year registered nurse diploma program to train professional nurses. Admission is based upon the intermediate baccalaureate. The first school was established in 1978. There were 6 schools in 1978, 32 in 1987 (17 for boys, 15 for girls). There were 485 graduates in 1985, and 1,000 in 1986.

HIGHER SCHOOLS FOR MIDWIVES

These schools offer a three-year certificate program for girls. Admission is based upon the intermediate baccalaureate.

PRIMARY NURSING SCHOOLS

Thirty schools offer a one-year certificate program to train auxiliary nurses, health aides, and midwifery aides, and a three-year diploma program to train licensed practical nurses. Admission is based upon the primary school certificate (i.e., completion of six years of education). The first school was established in 1933.

TRAINING CENTER

This center offers various non-credit, in-service training courses and programs:

1. Health officials—a one-month training course.
2. Health workers—a one-month training course in anatomy, physiology, surgery, and practical training. Admission is restricted to those who have a preparatory baccalaureate, scientific section, and at least one year of employment experience in allied health. Some of the students have a bachelor's degree.
3. Midwives—a one-month training course.
4. Nurses—a one-year program for nurses working in maternity and children's hospitals.
5. Nurses—short-term courses for staff nurses.
6. Others—short-term basic courses in nursing and first aid for employees of unions and of other ministries.

G. Ministry of Heavy Industries

This ministry has also been known as the Ministry of Industry and Minerals.

INSTITUTE FOR ENGINEERING INDUSTRIES

Also known as the SPECIALIZED INSTITUTE FOR ENGINEERING INDUSTRIES, this institute offers short-term, non-credit, in-service training courses.

H. Ministry of the Interior

INSTITUTE OF POLICE

Located in Baghdad, this institute offers a three-year program of study leading to a Certificate of *Mufawwadh* (commission, i.e., as a police officer). Admission is based upon the intermediate baccalaureate.

POLICE ACADEMY

Located in Baghdad, this academy offers a four-year bachelor of science degree program in police science. The first three years involve coursework; the fourth year involves supervised field training. Admission requires a preparatory baccalaureate.

TRAFFIC INSTITUTE

Located in Baghdad, this institute is also known as the INSTITUTE OF TRAFFIC POLICE. It offers a three-year program of study leading to a Certificate of *Mufawwadh* (commission, i.e., as a police officer). Admission requires an intermediate baccalaureate.

I. Ministry of Justice

FORENSIC MEDICINE INSTITUTE

No information is available.

HIGHER JUDICIAL INSTITUTE

Established in Baghdad in 1976 to train judges and prosecutors, this institute is also known as the JUDICIAL INSTITUTE. It offers a two-year program of study leading to a Higher Diploma in Judicial Studies. Admission is based upon a bachelor of arts degree in law from a college of law or a college of law and politics of one of the universities. This institute also offers short-term, non-credit, in-service training courses for personnel in the legal departments of other ministries and for judicial investigators, notary publics, and the police.

J. Ministry of Labor and Social Affairs

AL-AMAL INSTITUTE FOR THE DEAF AND DUMB, BAGHDAD

No information is available.

CENTER FOR REHABILITATION OF THE BLIND

This center serves persons who were disabled in the Iran-Iraq war.

LABOR EDUCATION INSTITUTE

Established in 1964 as the LABOR EDUCATION AUTHORITY, this institute was renamed in 1984. It offers short-term, non-credit, in-service training courses.

REHABILITATION CENTER

This center has branches in Babylon, Baghdad, Ta'mim, and Thikar governorates. It serves persons who were disabled in the Iran-Iraq war.

SCHOOL FOR SOCIAL WORKERS

This school offers a three-year certificate program. Admission is based upon the intermediate baccalaureate.

K. Ministry of Light Industries

VOCATIONAL TRAINING CENTER FOR ELECTRICAL AND ELECTRONIC INDUSTRIES

This center offers short-term, non-credit, in-service training courses.

L. Ministry of Local Government

ADMINISTRATIVE AND TECHNICIANS INSTITUTE

This institute will be created by a merger of the Institute for Administration and the Technical Institute.

Established in 1985, the Institute for Administration has also been known as the Administration Institute. It offers programs one year in length and longer, to develop and improve the administrative skills of employees in the admininistrative and technical departments of this ministry.

The Technical Institute offers short-term, non-credit, in-service training courses. It is administered by the Water and Sewage Authority of this ministry.

INSTITUTE FOR ADMINISTRATION. *See* Administrative and Technicians Institute.

TECHNICAL INSTITUTE. *See* Administrative and Technicians Institute.

M. Ministry of Oil and Minerals

This ministry is sometimes referred to as the Ministry of Petroleum and Mining.

INSTITUTE FOR GEOLOGICAL SURVEYING

Located in Baghdad, this institute offers a two-year diploma program. Admission is based upon the preparatory baccalaureate, scientific section, or vocational baccalaureate, industrial section.

INSTITUTE FOR GEOMETRY

Located in Baghdad, this institute offers a two-year diploma program. Admission is based upon the preparatory baccalaureate, scientific section, or vocational baccalaureate, industrial section.

INSTITUTE FOR PETROLEUM TRAINING

Also known as the INSTITUTE OF OIL TRAINING and the OIL TRAINING CENTER, this institute has branches in Baghdad and Kirkuk. It offers a two-year diploma program. Admission is based upon the preparatory baccalaureate, scientific section, or the vocational baccalaureate, industrial section. This institute also offers short-term, non-credit, in-service training courses. It admits 3,000 new students each year.

The diploma program is 40% theoretical, 60% practical. Students can specialize in building and construction, cars and heavy equipment, chemical testing, cooling and air conditioning, distribution units operation, drilling apparatus mechanics, electronic technology, gas and electric welding technology, gas pumps and turbines, gas technology, general electricity, materials administration, oil and gas pipes technology, oil and gas production and field measurement, oil and gas well drilling, refinery units operation, standardization and control systems, or surveying. Second-year students are involved in actual production operations in the oil fields. The top graduates can enroll in a bachelor's degree program in engineering.

N. Ministry of Planning

NATIONAL CENTER FOR CONSULTATION AND ADMINISTRATIVE DEVELOPMENT

Established in 1970, this center is also known as the NATIONAL CENTER FOR CONSULTATION AND MANAGEMENT DEVELOPMENT. It offers short-term, non-credit, in-service training courses.

NATIONAL COMPUTER CENTER

Established in Baghdad in 1972, this center is a central computer service bureau for the various divisions of the government of Iraq. It offers three types of programs: short-term, in-service training courses; a one-year fulltime program leading to a Higher Diploma in Computer Science; and a two-year fulltime program leading to a master of science degree in computer science. The two-year program is offered in cooperation with the University of Technology.

NATIONAL INSTITUTE FOR PLANNING

Established in Baghdad in 1979, this institute offers two-week to one-year non-credit, in-service training courses in national planning and in economics. It also offers a one-year higher diploma program in national economic planning.

O. Ministry of Trade

This ministry is sometimes also called the Ministry of Commerce.

TRAINING CENTER

Located in Baghdad, this center offers non-credit, in-service training courses.

P. Ministry of Transportation and Communications

AVIATION INSTITUTE

Located in Baghdad, this institute is also known as the CIVIL AVIATION INSTITUTE. It offers a three-year diploma of technician program to train civilian pilots and aircraft technicians. Two years of coursework and one year of supervised practical training are required. Admission is based upon the preparatory baccalaureate, scientific section, or the vocational baccalaureate, industrial section.

INSTITUTE OF ROUTES AND LINES

Located in Baghdad, this institute offers a three-year diploma of technician program to train employees for mass transportation (airline and railroad) systems. Two years of coursework and one year of supervised practical training are required. Admission is based upon the preparatory baccalaureate, scientific section, or the vocational baccalaureate, industrial section.

INSTITUTE OF WIRE COMMUNICATIONS

Located in Baghdad, this institute offers a three-year certificate program. Graduates are employed by the post, telegraph, and telephone departments of the Ministry of Transportation and Communications. Admission is based upon the intermediate baccalaureate.

INSTITUTE OF WIRELESS COMMUNICATIONS

Located in Baghdad, this institute offers a three-year diploma of technician program, requiring two years of coursework and one year of supervised practical training. Graduates work in radio and television. Admission is based upon the preparatory baccalaureate, scientific section, or vocational baccalaureate, industrial section.

TELECOMMUNICATIONS INSTITUTE

This institute was divided into the INSTITUTE OF WIRE COMMUNICATIONS and the INSTITUTE OF WIRELESS COMMUNICATIONS.

Q. Ministry of Youth

NATIONAL INSTITUTE FOR YOUTH

No information is available.

R. State Organization for Tourism

BAGHDAD INSTITUTE OF TOURISM AND HOTEL SERVICES

This institute was also known as the HOTEL AND TOURISM MANAGEMENT TRAINING CENTER. A secondary-level institution, it offered two certificate programs:

1. Basic—Admission was based upon completion of primary school (i.e., six years of education).
2. Advanced—Admission was based upon completion of the basic program or upon the intermediate baccalaureate.

In the 1980s, this institute was upgraded to the university level. It is now the DEPARTMENT OF HOTEL AND TOURISM MANAGEMENT in the College of Administration and Economics of the University of Al-Mustansiriyah. It receives assistance from the State Organization for Tourism.

V. Institutions Supervised by International Organizations

A number of international organizations operate educational institutions or programs which are located in Iraq but which are not part of the Iraqi educational system.

ARAB FEDERATION FOR TECHNICAL EDUCATION

The federation was established in Baghdad in 1980 by Algeria, Iraq, Libya, Mauritania, and the United Arab Emirates. Sudan and Syria joined it in 1985. It offers short-term, non-credit, in-service training courses on audio-visual arts, class planning, teaching methodology, training techniques, use of computers in teaching, and similar topics related to technical education.

ARAB GULF STATES INFORMATION DOCUMENTATION CENTER

Established in Baghdad in 1981, this center offers short-term, non-credit, in-service training courses on abstracting, indexing, microfilm documentation, and similar topics related to the maintenance of government libraries.

ARAB ILLITERACY ERADICATION AND ADULT EDUCATION ORGANIZATION

Located in Baghdad, this organization is sponsored by the Arab League Educational, Cultural, and Scientific Organization/ALESCO (the Arab League's counterpart to the United Nations Educational, Scientific, and Cultural Organization/UNESCO). It assists government personnel with the planning and implementation of illiteracy eradication programs.

ARAB PETROLEUM TRAINING INSTITUTE

Located in Baghdad, this institute is sponsored by the Organization of Arab Petroleum Exporting Countries/OAPEC. It offers a series of short-term, in-service training courses and seminars for teachers and trainees of the petroleum industry training centers of its member countries. Approximately 400 persons take these courses and seminars each year. For example, a four-week course for teachers is designed to promote new teaching and training methods and techniques. It includes educational psychology, definition and characteristics of behavior, planning for teaching, laboratory work, audio-visual techniques, and field visits. Other courses pertain to training methods and techniques in instrumentation and control in the petroleum industry, design and use of training packages, and supervising skills.

ARABIAN GULF ACADEMY FOR MARITIME STUDIES

Located in Um Qasr in southern Iraq, this academy is sponsored by seven Gulf countries: Bahrain, Iraq, Kuwait, Oman, Qatar, Saudi Arabia, and United Arab Emirates. It offers non-credit, in-service training courses for persons employed in the merchant marine of the seven sponsoring countries. This academy also operates a Naval College which offers a four-year bachelor of science degree program in marine science. The first, second, and fourth years involve coursework. The third year involves 18 months of practical training on a training ship operated by the school. The curriculum is illustrated in Table 5.1.

The grading scale is 0% to 100%. The minimum passing grade is 40% for first year subjects, 50% for second year subjects. In the fourth year, the minimum passing grade is 30%, 50%, 60%, or 90%, depending upon the subject involved.

INSTITUTE OF ARAB RESEARCH AND STUDIES

This institute was established in Mosul in 1953 by the Arab League Educational, Cultural, and Scientific Organization/ALESCO (the Arab League's counterpart to UNESCO). It was moved to Baghdad in 1981. Students come from various Arab countries, including Djibouti, Somalia, Tunisia, and Yemen.

This institute has eight departments: economic, geographical, historical, legal, literary and linguistic, Palestinian, political and national, and social. It sponsors research, publications, and lectures, and offers two academic programs: a two-year higher diploma program that requires one semester of general coursework (taken in all eight departments), two semesters of specialized coursework (taken in one of the eight departments), and a dissertation; and a master of arts degree program that requires a thesis. Admission to the master's degree program is based upon the higher diploma.

Table 5.1. Bachelor of Science Curriculum in Marine Science, 1978-82, Naval College, Arabian Gulf Academy for Maritime Studies

Subject	Hours/Max.	
First Year		
Chemistry	34	50
Coastal Navigation I	128	175
Descriptive Geometry	34	30
Electrical Engineering I	34	30
Engineering Drawing	30	30
English Language	111	90
First Aid	15	15
International Naval Law	32	30
Marine Engineering	34	30
Mathematics I	175	150
Mechanics	64	60
Naval History	32	30
Physics	79	100
Seamanship	111	150
Ship Architecture	34	30
Visual Signalling	30	30
Totals	977	1030
Second Year		
Basics of Radio	136	140
Cargo Works & Ship Management	119	120
Coastal Navigation II	68	75
Electrical Engineering II	68	60
Machine Theory	34	30
Mathematics II	85	80
Meteorology	85	75
Navigation Astronomy	153	150
Navigation Equipment	102	100
Physics	51	50
Seamanship	119	120
Ship Architecture	34	30
Theories of Ships	51	50
Visual Signalling	17	20
Totals	1122	1100
Third Year		
18 months of practical training on a training ship operated by the Naval College.		
Fourth Year		
Architecture & Theories on Stability of Ships	17	100
Cargo Works	34	100
Coastal Navigation III	68	125
Economics of Naval Transportation	68	50
International Naval Law	17	50
Machine Management	17	50
Meteorology & Oceanography	15	75
Naval Astronomy	34	100
Navigation Equipment	51	100
Regulations for Preventing Collisions at Sea	34	100
Seamanship	34	125
Ships' Vital Statistics	34	50
Telecommunications & Wireless	34	75
Totals	457	1100

Hours = Hours per year; Max. = Maximum possible grade.

VI. Suggestions for Admissions Officers

A. Transliteration of Arabic Names and Words

The names of some towns and governorates start with the prefix Al-, which means *the*. When the first letter of the name begins with d, n, r, or s, the prefix is pronounced as *ad*, *an*, *ar*, or *as*, respectively. On occasion, the prefix will be transliterated according to the sound and not according to the Arabic letters. For example: Ad-Diwaniyah, An-Nasiriyah, Ar-Ramadi, and As-Sulaimaniya are spelled this way on some maps and documents and in some publications, but are spelled Al- in others.

In Iraq, there is no consistency in the use of, or omission of, the prefix. For simplicity, the prefix has been omitted from town and governorate names in this publication. When looking for the name of a town or governorate whose name begins with Ad-, Al-, An-, Ar-, or As-, look under the first letter of the rest of the name.

In this publication, the names of academic institutions, governorates, and towns, and the Arabic words which appear without translation follow the form of transliteration most commonly used in Iraq. For example, the name of the Islamic holy book is transliterated as Qur’an in Iraq, whereas Koran is more common in other countries. Many variations of these names and words may appear on educational credentials. For example, the name of the city of Arbil is often transliterated as Arbeel, Erbeel, Erbil, Irbeel, or Irbil. Similarly, *Shari’a* (Islamic jurisprudence) is often transliterated as *Al-Shari’a, Alsharea, Alsharea’*, or *Sharia*. For assistance with these and other inconsistencies in transliteration, see Appendix A.

B. Translation of Arabic Words

Many Arabic words are translated into English in more than one way. In most cases the differences in meaning are minor. However, the differences in spelling can make it difficult to locate the name of an academic institution or program or the name of a subject within the alphabetic listings which are included in this publication. For example, one Arabic word is translated as *for* in some instances and as *of* in others. Appendix B provides a guide to the most common variations in translation which appear in this publication. The glossary provides the meaning in English for Arabic words which are found in this publication.

C. Variations in Names of Institutions

The names of some academic institutions may be translated or transliterated in a variety of ways. In addition, the names of many individual academic institutions and the names of some of the divisions of the universities have been changed one or more times over the years. All known variations in names have been included in this publication. For assistance in locating the relevant entries in this publication, see Appendix C.

D. Official Grade Reports

In Iraq, there is a difference between student grade reports and official grade reports. Student grade reports are issued to students at the end of each year (or at the end of each semester of programs which follow the semester system). At the primary and secondary levels, number grades are reported. At the tertiary level, only word grades are reported (excellent, very good, good, average, pass, or fail). (For additional information on grading, see chapter I, section L.) Written in Arabic by school officials and designed solely for student and parent use, student grade reports are written on plain paper which does not contain a letterhead, seal, signature, or stamp.

An official grade report for an intermediate, preparatory, or vocational baccalaureate examination, or for a preparatory-level teacher training program is issued by the Ministry of Education. An official grade report for a tertiary-level program is issued by the registrar of the tertiary-level institution. These reports are issued in the language of the country in which further study is planned. Each student is instructed to have the official grade report stamped, first by the Ministry of Foreign Affairs and then by the embassy in Baghdad of the country to which the report will be sent. The official grade report usually appears on letterhead stationery and usually contains a picture of the student. An ink stamp from the office which issued the grade report and the signature of the official who prepared it will always appear on the document.

Official grade reports are usually prepared by persons for whom English is a foreign language. For this reason, reports frequently contain typographical errors, overstrikes and erasures. In addition, because of financial problems, institutions sometimes do not have a sufficient supply of letterhead stationery; therefore grade reports may appear on stationery with a variety of letterheads or even with no letterhead at all.

Because of the great variation in the format of official grade reports, admissions officers may receive many grade reports from a single institution and find that none seem to match. Grade reports should not necessarily be rejected because they do not look like another grade report from the same institution. Instead, care should be taken to check for ink stamps and original signatures and for consistency in typefaces for all typed entries on a grade report, including the name of the student, dates, subjects, and grades.

Only persons who have been authorized to study outside Iraq may request an official grade report. Currently, to make the maximum possible use of educated citizens and to minimize the use of scarce foreign exchange reserves, permission to study outside Iraq is granted only to those persons who have received a scholarship for all expenses from the government of Iraq or from a foreign government or university. At the present time, the government of Iraq grants scholarships for foreign study only at the graduate level. Each authorized person may request a maximum of five copies of an official grade report. The name of the university for which it was issued will appear on the grade report.

For those who wish to apply to more than five universities, the educational advisor at the U.S. Information Service/USIS office in Baghdad offers a special service. The advisor will make additional copies of one of the official grade reports, certifying that they are accurate copies. U.S. admissions officers can rely on the accuracy of these copies, even though another U.S. university's name may appear as the addressee. When the student has selected one university in which to enroll, the advisor will send the original file copy to that university for its records, if the student so requests.

Admissions officers who have questions concerning educational institutions and programs in Iraq may request assistance from the Educational Advisor; USIS, U.S. Embassy, Baghdad; Department of State; Washington, DC 20520.

The Educational Advisor needs bulletins from U.S. universities and colleges for the USIS advising library. In some cases, university bulletins from the 1975-80 era are still being used because more recent editions have not been received. Because only graduate students receive permission to study outside Iraq at the present time, there is little need for bulletins from institutions which offer only undergraduate programs. Bulletins can be sent to the address noted above if they weigh less than two pounds. If they weigh more than two pounds, then the zip code should be changed to 20521.

E. U.S. Admissions Examinations

The U.S. Information Service in Baghdad administers in Baghdad the Education Council for Foreign Medical Graduates/ECFMG examination, the Graduate Management Admission Test/GMAT, Graduate Record Examination/GRE, Scholastic Aptitude Test/SAT, and the Test of English as a Foreign Language/TOEFL. Iraqi students can pay for these examinations in Iraqi *dinars*. Students who do not live in Baghdad may find it difficult to make arrangements to take these examinations.

Learning about these examinations and being able to take them in time is a problem for all Iraqi students. Government scholarship awardees are usually selected in March. They are expected to begin their graduate programs in August or September of the same year. In most cases, there is insufficient time to apply for and take U.S. admissions examinations before the deadline for admission to the fall term at most U.S. institutions.

F. English Proficiency

Arabic is the primary language of instruction in all educational programs in Iraq. Although English is still used as a language of instruction for some courses, particularly in colleges of engineering, medicine, and science, that does not mean that graduates of those colleges will be proficient enough in English to enroll in a fulltime academic program in the United States (see chapter I, sections H and I).

In all cases, it is advisable to require TOEFL or another test of English proficiency. Students who have received a scholarship from the government of Iraq are authorized to complete up to six months of study in an intensive English language program in the United States if they have been admitted to a master's or doctoral program.

G. THE ROLE OF THE NATIONAL COUNCIL ON THE EVALUATION OF FOREIGN EDUCATIONAL CREDENTIALS

The placement recommendations that follow have been approved by the National Council on the Evaluation of Foreign Educational Credentials. In order that these recommendations may be of maximum use to admissions officers, the following information on the development of the terminology used in stating the recommendations, along with instructions for their use, is offered by the Council and the World Education Series Committee.

The recommendations deal with all levels of formal education in roughly chronological order up through the highest degree conferred. Recommendations, as developed through discussion and consensus in the Council, are not directives. Rather, they are general guidelines to help admissions officers determine the admissibility and appropriate level of placement of students from the country under study.

The recommendations should be applied flexibly rather than literally. Before applying the recommendations, admissions officers should read the supporting pages in the text and take into account their own institutional policies and practices. For example, a recommendation may be stated as follows: ". . . may be considered for up to one year of transfer credit. . ." The implication is that the U.S. institution may consider giving less than or as much as one year of transfer credit, the decision to be based on various factors—the currentness of the applicant's transfer study, applicability of the study to the U.S. curriculum, quality of grades, and the receiving institution's own policies regarding transfer credit. Similarly, the recommendation ". . . may be considered for freshman admission" indicates possible eligibility only; it is not a recommendation that the candidate be admitted. Although consideration for admission at the same level may be recommended for holders of two different kinds of diplomas, use of identical phrasing in the recommendations does not mean that the two diplomas are identical in nature, quality, or in the quantity of education they represent.

In most cases, the Council will not have attempted to make judgments about the quality of individual schools or types of educational programs within the system under study. Quality clues are provided by the author and must be inferred from a careful reading of the text.

Certain phrases used repeatedly in the recommendations have acquired, within Council usage, specific meanings. For example, "through a course-by-course analysis" means that in dealing with transfer credit, each course taken at the foreign institution is to be judged on an individual basis for its transferability to the receiving institution. When the phrase "may be considered for undergraduate admission based upon a careful review of the syllabus" is used, it implies that many of the courses in the program may not be appropriate for transfer credit in a U.S. bachelor's degree program. Another phrase "where technical training is considered appropriate preparation" suggests that the curriculum followed by the candidate is specialized, and this wording is often a hint that within the foreign system the candidate's educational placement options are limited to certain curriculums. However, while the Council is aware of the educational policies of the country under study, the Council's policies are not necessarily set in conformity with that country's policies. Rather, the recommendations reflect U.S. philosophy and structure of education.

In voting on individual recommendations, Council decisions are made by simple majority. Although consistency among volumes is sought, some differences in philosophy and practice may occur from volume to volume.

H. Placement Recommendations

NOTE: Where there was insufficient information available on a program or credential mentioned in this publication, no placement recommendation was made.

Credential	Minimum Entrance Requirements	Length of Program	Gives Access in Country to	Placement Recommendations
I. Primary, Intermediate, Preparatory, and Preparatory-Level Education				
1. **Primary School Certificate (Primary Baccalaureate)** (p. 11)	Age 6	6 years	Intermediate School	May be placed in grade 7.
2. **Intermediate Baccalaureate (Certificate of Intermediate Studies)** (p. 12)	Primary School Certificate (6 years)	3 years	Preparatory School	May be placed in grade 10.
3. **Preparatory Baccalaureate: Literary** or **Scientific Section** (p. 16)	Intermediate Baccalaureate (9 years)	3 years	University	May be considered for freshman admission.
4. **Vocational Baccalaureate: Agricultural, Commercial, Home Economics, Industrial,** or **Veterinary Section** (pp. 19–28)	Intermediate Baccalaureate (9 years)	3 years	Employment or further education	May be considered for freshman admission if a vocational program is considered appropriate preparation.

NOTE: Students who have completed some coursework for any of the programs listed below may be considered for undergraduate admission with up to one year of transfer credit for each year completed, determined through a course-by-course analysis. When the length of a program is cited, it refers to the standard length of the program when pursued fulltime. The actual period of attendance may vary.

II. University Education

5. **Certificate in Economic Statistics, Educational Statistics, Library Science** or **Science** from University of Al-Mustansiriyah (no longer awarded) (pp. 74, 79)	Preparatory Baccalaureate	1 year	Employment or further education	May be considered for undergraduate admission with up to one year of transfer credit determined through a course-by-course analysis.
6. **Certificate in [Specialization] Technology** from University of Baghdad (no longer awarded) (p. 110)	Preparatory Baccalaureate	1 year	Employment	See placement recommendation #5.
7. **Certificate in French** from University of Al-Mustansiriyah (no longer awarded) (p. 74)	Preparatory Baccalaureate	2 years	Employment or further education	May be considered for undergraduate admission with up to two years of transfer credit determined through a course-by-course analysis.
8. **Advanced Diploma** or **Higher Diploma in Accounting** or **Business Administration** (no longer awarded) from University of Al-Mustansiriyah or University of Mosul (pp. 74, 115)	Diploma in Administration, or Economics	1 year	Employment	May be considered for up to one year of undergraduate transfer credit determined through a course-by-course analysis.
9. **Diploma in Accountancy, Agricultural Cooperatives** (no longer awarded), **Marketing, Stores**	Preparatory Baccalaureate	2 years	Further education	May be considered for undergraduate admission with up to two years of transfer credit determined through a course-by-

continued

(Warehouse) Management from University of Al-Mustansiriyah (p. 72)				course analysis.
10. **Diploma in Administration or Economics** (no longer awarded) from University of Al-Mustansiriyah or University of Mosul (pp. 74, 115)	Preparatory Baccalaureate	2 years	Further education	May be considered for undergraduate admission with up to two years of transfer credit determined through a course-by-course analysis.
11. **Diploma in Agriculture** from University of Baghdad (no longer awarded) (pp. 89, 110)	Preparatory Baccalaureate	2 years	Employment	See placement recommendation #10.
12. **Diploma in Applied Engineering** from University of Baghdad (no longer awarded) (p. 110)	Preparatory Baccalaureate	2 years	Employment	See placement recommendation #10.
13. **Diploma in Art Education, Interior Design and Furnishing, or Sewing and Tailoring** from University of Baghdad (no longer awarded) (p. 108)	Preparatory Baccalaureate	2 calendar years	Further education	See placement recommendation #10.
14. **Diploma in [Specialization] Engineering** from University of Al-Mustansiriyah (no longer awarded) (p. 81)	Preparatory Baccalaureate	2 years	Employment and further education	May be considered for undergraduate admission with up to two years of transfer credit determined through a course-by-course analysis.

15. **Diploma in [Specialization] Technology** from University of Baghdad (no longer awarded) (p. 110)	Preparatory Baccalaureate	2 years	Employment	See placement recommendation #14.
16. **Diploma in Library Science** from University of Al-Mustansiriyah (no longer awarded) (p. 74)	Preparatory Baccalaureate	2 years	Employment or further education	See placement recommendation #14.
17. **Diploma in Medical Technology** from University of Baghdad or **Diploma of Laboratory Technician** from University of Mosul (both no longer awarded) (pp. 106, 121)	Preparatory Baccalaureate	2 calendar years	Employment	See placement recommendation #14.
18. **Diploma in Stores Management** from University of Baghdad (no longer awarded) (p. 109)	Preparatory Baccalaureate	2 years	Employment	See placement recommendation #14.
19. **Diploma of Technician** or **Technical Diploma** from University of Al-Mustansiriyah (no longer awarded) and University of Technology (pp. 81, 129)	Preparatory Baccalaureate	2 years	Employment and further education	See placement recommendation #14.
20. **Diploma in Accountancy** (no longer awarded) from University of Baghdad (pp. 86, 107)	Preparatory Baccalaureate	3 years	Further education	May be considered for undergraduate admission with up to three years of transfer credit determined through a course-by-course analysis.

continued

21. **Diploma in General Administration** from University of Baghdad (no longer awarded) (p. 109)	Preparatory Baccalaureate	3 years	Employment	See placement recommendation #20.
22. **Diploma in Statistics** or **Hotel Management** or **Tourism Management** from University of Al-Mustansiriyah (no longer awarded) (p. 72)	Preparatory Baccalaureate	3 years	Employment	See placement recommendation #20.
23. **Diploma in Public Administration** from Institute of Public Administration or University of Baghdad (no longer awarded) (pp. 61, 109)	Preparatory Baccalaureate	4 years	Employment	May be considered for undergraduate admission with up to four years of transfer credit determined through a course-by-course analysis.
24. **Bachelor of Arts** (p. 44)	Preparatory Baccalaureate	4 years	Further education	May be considered for graduate admission.
25. **Bachelor of Education** (p. 44)	Preparatory Baccalaureate	4 years	Further education	May be considered for graduate admission.
26. **Bachelor of Science** (p. 44)	Preparatory Baccalaureate	4 years	Further education	May be considered for graduate admission.
27. **Bachelor of Dental Surgery (B.D.S.)** (p. 44)	Preparatory Baccalaureate	5 years	Further education	A first professional degree in dentistry; may be considered for graduate admission.
28. **Bachelor of Science in Architectural Engineering** (*See also* placement recommendation #33) (pp. 44–45)	Preparatory Baccalaureate	5 years (first graduate 1979)	Further education	A first professional degree in architecture; may be considered for graduate admission.

29. **Bachelor of Science in Engineering**				
a. (pp. 44–45)	Preparatory Baccalaureate	5 years (last graduate 1978)	Further education	May be considered for graduate admission.
b. (pp. 44–45)	Preparatory *Baccalaureate*	4 years (first graduate *1978*)	Further education	May be considered for graduate admission.
c. from University of Technology (no longer awarded) (p. 129)	Diploma of Technician from University of Technology	2 years	Further education	May be considered for graduate admission.
30. **Bachelor of Science in Nuclear Engineering** from University of Baghdad (p. 96)	Preparatory Baccalaureate	5 years	Further education	May be considered for graduate admission.
31. **Bachelor of Science in Pharmacy** (p. 44)	Preparatory Baccalaureate	5 years	Further education	A first professional degree in pharmacy; may be considered for graduate admission.
32. **Bachelor of Veterinary Medicine and Surgery** (p. 44)	Preparatory Baccalaureate	5 years	Further education	A first professional degree in veterinary medicine; may be considered for graduate admission.
33. **Bachelor of Science in Architecture** or **Architectural Engineering** (*See also* placement recommendation #28) (pp. 44–45)	Preparatory Baccalaureate	6 years (last graduate 1979)	Further education	A first professional degree in architecture; may be considered for graduate admission.
34. **Bachelor of Medicine, Bachelor of Surgery**, or **Bachelor of Medicine and Surgery** (**M.B.B.S.** or **M.B.Ch.B.**) (p. 44)	Preparatory Baccalaureate	6 years + 1 year of internship	Further education	A first professional degree in medicine; may be considered for graduate admission.

continued

35. **Bachelor of Science in Systems Analysis** from University of Baghdad (prior *to 1976*) (p. 96)	Bachelor of Science	2 years	Further education	May be considered for graduate admission with no graduate transfer credit.
36. **Diploma in Radiology** from University of Mosul (p. 120)	M.B.B.S./ M.B.Ch.B.	2 years	Employment	May be considered for graduate transfer credit determined through a course-by-course analysis.
37. **Higher Diploma** awarded				
a. **in a field other than Education or Library Science** (pp. 46–47, 86, 93, 104)	Bachelor's degree	1 to 3 years	Further education	May be considered for graduate transfer credit determined through a course-by-course analysis.
b. **in Education** from University of Baghdad (p. 90)	Bachelor's degree	1 year	Employment	May be considered to have completed one year of undergraduate-level coursework in secondary teacher training.
c. **in Library Science** (no longer awarded) (pp. 74, 90)	Bachelor's degree in another field	1 calendar year	Employment	May be considered for graduate transfer credit determined through a course-by-course analysis.
d. in **Secretarial Studies** from University of Baghdad (no longer awarded) (See also recommendation #8) (pp. 58, 107)	Preparatory Baccalaureate	3 years	Employment	May be considered for undergraduate admission with up to three years of transfer credit determined through a course-by-course analysis.
38. **Master of Arts** (p. 45–46)	Bachelor's degree	2 years	Doctoral study	May be considered to have a degree comparable to a U.S. master's degree.

39. **Master of Education** (pp. 45–46)	Bachelor's degree	2 years	Doctoral study	See placement recommendation #38.
40. **Master of Science** (pp. 45–46)	Bachelor's degree	2 years	Doctoral study	See placement recommendation #38.
41. **Master of Science in Nuclear Engineering** (p. 96)	Bachelor of Science in Nuclear Engineering	1 year	Doctoral study	See placement recommendation #38.
42. **Doctor of Philosophy** (p. 47)	Master's degree	3 years	University teaching	May be considered to have a degree comparable to a U.S. earned doctorate.
III. Technical or Specialized Institutes				
43. **Certificate or Diploma of Technician in [Specialization] or Technical Diploma in [Specialization]** from a technical institute (pp. 47–49)	Preparatory or Vocational Baccalaureate	18–24 months	Employment or further education	May be considered for undergraduate admission with up to two years of transfer credit determined through a careful review of the syllabus.
44. **Diploma** from the Higher Institute of Paramedical Professions (p. 143)	a. Intermediate Baccalaureate	2 calendar years	Employment	May be considered for freshman admission if a vocational program is considered appropriate preparation.
	b. Intermediate Baccalaureate	5 calendar years	Employment or further education	May be considered for undergraduate admission with up to two years of transfer credit for work completed during the last two years, determined through a careful review of the syllabus.

continued

	c. Preparatory Baccalaureate	2 calendar years	Employment or further education	See placement recommendation #43.
45. **Diploma in Accountancy** from Higher Institute of Accountancy (no longer awarded) (pp. 56, 122)	Preparatory Baccalaureate	3 years	Employment or further education	May be considered for undergraduate admission with up to three years of transfer credit determined through a course-by-course analysis.
46. **Diploma in Industrial Engineering** from Higher Institute of Industrial Engineering or University of Baghdad (no longer awarded) (pp. 56, 107)	Preparatory Baccalaureate	3 years	Employment	May be considered for undergraduate admission with up to three years of transfer credit determined through a course-by-course analysis.
47. **Diploma in Foreign Languages** from Institute of Languages (no longer awarded) (p. 109)	Preparatory Baccalaureate	3 years	Employment	See placement recommendation #45.
48. **Diploma in Forestry** from Institute of Forestry (no longer awarded) (p. 60)	Preparatory Baccalaureate	3 years	Employment	See placement recommendation #45.
49. **Diploma in Physical Education** from Higher Institute of Physical Education (no longer awarded) (pp. 57, 102)	Preparatory Baccalaureate	3 years	Employment or further education	See placement recommendation #45.
50. **Bachelor of Science** from Higher Technical Institute (p. 57)	Preparatory Baccalaureate or Vocational Baccalaureate, Industrial Section	5 years	Further education	May be considered for graduate admission.

51. **Higher Diploma awarded by**				
a. **Higher Judicial Institute** (p. 145)	Bachelor of Arts in Law	2 years	Further education	May be considered for graduate transfer credit determined through a course-by-course analysis.
b. Institute of Arab Research and Studies (p. 151)	Bachelor's degree	2 years	Employment	See placement recommendation #51a.
c. National Computer Center (p. 148)	Bachelor's degree	1 year	Employment	See placement recommendation #51a.
52. **Master of Arts** from Institute of Arab Research and Studies (p. 151)	Higher Diploma from Institute of Arab Research and Studies	1 year	Employment	May be considered to have a degree comparable to a U.S. master's degree.
53. **Master of Science in Computer Science** from National Computer Center (p. 148)	Bachelor's degree	2 years	Further education	May be considered to have a degree comparable to a U.S. master's degree.

IV. Teacher Training (Note: See also placement recommendation #37b.)

54. **Diploma in Primary Education (Certificate in Primary Education)** (p. 28–33)				
a. from a teacher training school (1923–69)	Intermediate Baccalaureate (9 years)	2 years	Employment	May be considered for freshman admission if subjects studied and teaching experience provide appropriate preparation.
b. from a teacher training school (1971–88)	Intermediate Baccalaureate (9 years)	3 years	Employment	May be considered for freshman admission if subjects studied provide appropriate preparation.

continued

c. from a teacher training institute (1987–present)	Intermediate Baccalaureate (9 years)	5 years	Employment	May be considered for undergraduate admission with up to two years of transfer credit determined through a course-by-course analysis for work completed during the last two years.
55. **Diploma in Primary Education—Fine Arts** from institutes of fine arts (p. 33)	Intermediate Baccalaureate (9 years)	3 years	Employment	May be considered for freshman admission if subjects studied provide appropriate preparation.
56. **Diploma in Primary Education—[Specialization]** in fields such as English, fine arts, human sciences, or physical education from a teacher training institute (p. 33)	Preparatory Baccalaureate (12 years)	2 years	Employment	May be considered for undergraduate admission with up to two years of transfer credit determined through a course-by-course analysis.
57. **Certificate of Participation** from a Ministry of Education teacher training program				
a. (p. 33)	Diploma in Primary Education (11–14 years)	2 weeks to 6 months	Employment	May be considered to have completed a non-credit in-service training program.
b. (p. 35)	Bachelor of Arts or Bachelor of Science (16 years)	3 to 6 months	Employment	May be considered to have completed a non-credit in-service training program.

Appendix A

Variations in the Transliteration of Arabic Names and Words

When Arabic words are transliterated from the Arabic alphabet to the western alphabet, translators attempt to choose the letters of the western alphabet which will best duplicate the Arabic sounds. There is no official standard for transliteration, and therefore any word can be transliterated in a variety of ways, even by the same translator. This can be confusing to persons who are not familiar with the Arabic language.

This publication has used the form of transliteration most commonly found for each individual Arabic name and word. This appendix can be used to identify the version used in this publication for words which are found on educational credentials from Iraq. For an example of the variety of ways in which one word might be spelled, see the first five entries. Note that the prefix **Al-** (and its **Ad-**, **An-**, **Ar-**, and **As-** variations) have been omitted from most proper names which appear in this publication. For further information on this topic, see chapter VI.

To Find	Look For
Abu-Gharib	Abu-Ghraib
Abu-Ghrib	Abu-Ghraib
Abu-Graib	Abu-Ghraib
Abu-Grhraib	Abu-Ghraib
Abu-Khraib	Abu-Ghraib
Ad-Diwaniyah	Diwaniyah
Ad-Dulaym	Dulaym
Al-Amarah	Amarah
Al-Anbar	Anbar
Al-Diwaniyah	Diwaniyah
Al-Dulaym	Dulaym
Al-Fickh	Al-Fiqih
Al-Hillah	Hillah
Al-Karkh	Karkh
Al-Kut	Kut
Al-Misayab	Misayab
Al-Muntafiq	Muntafiq
Al-Mussaib	Misayab
Al-Mussayab	Misayab
Al-Muthanna	Muthanna
Al-Najaf	Najaf
Al-Nasiriyah	Nasiriyah
Al-Nasiriyyah	Nasiriyah
Al-Nassiriyah	Nasiriyah
Al-Qadisiyah	Qadisiyah
Al-Ramadi	Ramadi
Al-Rasafa	Risafa
Al-Ressafa	Risafa
Al-Risafa	Risafa
Al-Rissafa	Risafa
Al-Samawah	Samawah
Al-Shabra	Shatra
Al-Sharea	Shari'a *or* Al-Shari'a
Al-Sharia	Shari'a *or* Al-Shari'a
Al-Shatra	Shatra
Al-Sulaimaniyah	Sulaimaniyah
Al-Taamim	Ta'mim
Al-Ta'meem	Ta'mim
Al-Tamim	Ta'mim
Alsharea	Shari'a *or* Al-Shari'a
Alsharea'	Shari'a *or* Al-Shari'a
An-Najaf	Najaf
An-Nasiriyah	Nasiriyah
Ar-Ramadi	Ramadi
Ar-Rasafa	Risafa
Arbeel	Arbil
As-Samawah	Samawah
As-Shatra	Shatra
As-Sulaimaniyah	Sulaimaniyah
Aski-Kalak	Aski-Kelek
Ba'qabah	Baqubah
Babel	Babylon
Babil	Babylon
Dhigar	Thikar
Dhikar	Thikar
Dhiqar	Thikar
Diala	Diyala
Dohok	Dahuk
Erbeel	Arbil
Erbil	Arbil
Eski-Kalak	Aski-Kelek

To Find	Look For
Hawija	Hewega
Hila	Hillah
Hilla	Hillah
Irbeel	Arbil
Irbil	Arbil
Kadisiya	Qadisiyah
Kerbela	Karbala
Koran	Qur'an
Maisan	Maysan
Meesan	Maysan
Meisan	Maysan
Messan	Maysan
Misan	Maysan
Missan	Maysan
Misayyab	Misayab
Mouthanna	Muthanna
Mussaib	Misayab
Mussayab	Misayab
Muthuma	Muthanna
Nasiriyyah	Nasiriyah
Naynawa	Nineveh
Ninevah	Nineveh
Qabah	Baqubah
Rasafa	Risafa
Ressafa	Risafa
Salah Al-Deen	Salahaddin
Salah Al-Din	Salahaddin
Salah Al-Uddin	Salahaddin
Salahudin	Salahaddin
Shabra	Shatra
Sulamaniya	Sulaimaniyah
Ta'meem	Ta'mim
Taamim	Ta'mim
Tamim	Ta'mim
Thi Qar	Thikar

Appendix B

Variations in the Translation of Arabic Words

There are some Arabic words which may be translated in different ways without significantly changing the meaning. However, these differences might make it difficult to find the name of an academic institution, or of an academic subject, in alphabetized lists in this publication. The most common variations are noted here.

To Find	Look For
computer hardware	computer systems
computer software	computer technology
for	of
graduate	higher
high	higher
higher	high
of	for
medical laboratory technology	clinical pathology
petrochemical industries	chemical industries
postgraduate	higher
warehouse	stores
water resource management	water plan operation

Appendix C
List of Academic Institutions

This appendix lists the individual current and former secondary-level and tertiary-level educational institutions supervised by 19 ministries, one ministry-level governmental agency, and international organizations. Page references are given for each. It also includes all variations of names which are known to the author. For descriptions of divisions, departments, or colleges within each institution, see the specific institution in chapter III, section F, or chapters IV or V.

Academy of Art, 55
Administrative and Technicians Institute, 146
Agricultural Extension and Training Department, 137
Air Force: Academy, 141; College, 141; Flying School, 141; Institute, 141
Al-Amal institute for the Deaf and Dumb, Baghdad, 145
Al-Anbar University, 83
Al-Bakr: Academy, 142; College, 142; University for Higher Military Studies, 142
Al-Fickh Religious College, 53
Al-Fiqih Religious College, 53
Al-Hikma University of Baghdad, 51-52
Al-Imam Al-Aazam, 52
Al-Imam Al-A'dham: College, 52; College of Islamic Studies, 52
Al-Jami'at Al-Mustansiriyah, 71-83
Al-Jami'at Al-Technologia, 128-136
Al-Mustansiriyah University, 71-83
Al-Najaf Theological University, 52-54
Al-Najaf University, 52-54
Al-Sha'ab University, 54
American School for: Boys, 16; Girls, 16
Anbar University, 83
Arab Federation for Technical Education, 150
Arab Gulf States' Information Documentation Center, 150
Arab Illiteracy Education and Adult Education Organization, 150
Arab Petroleum Training Institute, 150-151
Arabian Gulf Academy for Maritime Studies, 151
Army: Academy, 142; College, 142
Aviation Institute, 148

Baghdad College, 16
Baghdad High School, 16
Baghdad Institute of Tourism and Hotel Services, 149
Baghdad University, 83-110
Basrah University, 110-113
Broadcasting Training Institute, 139

Center for Rehabilitation of the Blind, 146
Civil Aviation Institute, 148

College of: Accountancy and Business Administration, 54; Agriculture, Abu-Ghraib, 54; Agriculture, Hammam al Alil, 54; Commerce, Baghdad, 54; Commerce, Basrah, 54; Engineering, Baghdad, 54; Engineering Technology, 57-58; Industrial Engineering, 57-58; Jurisprudence, 53; Languages, 60; Law, Baghdad, 55; Literature, Baghdad, 55; Medicine, Bagdad, 55; Medicine, Mosul, 55; Pharmacy, Baghdad, 55; Religion and Philosophy, 53, 63; Religious Jurisprudence, 63; Science, Baghdad, 55; Veterinary Medicine, 55

Dar El-Aloum, 52
Date Cultivation Research Institute, 60
Department of: Instructors' Training, 60; Preparation of Industrial Trainers, 60

Fine Arts Institute, 55
Foreign Service Institute, 143
Forensic Medicine Institute, 145

High Applied Engineering Institute, 56
High Engineering Institute, 56
High Institute of Accountancy, Baghdad, 56; Mosul, 56
High Technical Institute, 57-58
Higher Accountancy Institute, Baghdad, 56; Mosul, 56
Higher Agriculture Institute, 56
Higher Industrial Engineering Institute, 56
Higher Industrial Institute, 57-58
Higher Institute for Medical Professions, 143
Higher Institute of: Accountancy, Baghdad, 56; Accountancy, Mosul, 56; Health Professions, 143; Industrial Engineering, 56; Languages, 60; Paramedical Professions, 143; Physical Education, 57; Public Administration, 61; Teacher Training, 57; Teachers, 57
Higher Judicial Institute, 145
higher nursing schools, 144
higher schools for midwives, 144
Higher Teachers: College, 57; Training College, 57; Training Institute, 57
Higher Technical Institute, 57-58
Hotel and Tourism Management Training Center, 149

IDELTI, 35-36
Imam Al-A'dham Religious College, 52
Industrial College, 57-58
Industrial Trainers Institute, 60
Institute for: Administration, 146; Air Craft Mechanics, 141; Air Force Technicians, 141; Development of English Language Teaching in Iraq, 35-36; Drafting and Technical Drawing, 58; Engineering Industries, 144; Fine Arts, 55; Geological Surveying, 147; Geometry, 147; Petroleum Training, 147; Radar Technicians, 141; Surveying, 58
Institute of Administration, Babylon, 66; Karkh, 58; Risafa, 58-59; Sulaimaniyah, 69-70
Institute of Administration Technology, Baghdad, 59
Institute of Agricultural Technology, Baghdad, 70
Institute of: Animal Health, 137-138; Antiquities, 139; Applied Arts, Baghdad, 59-60; Arabian Music, 139; Arab Research and Studies, 151; Archaeology, 139; Dates and Date-Palm Research, Baghdad, 60; Engineer Training, 56; Fine Arts, 55; Foreign Services, 143; Forestry, 60; Higher Industrial Engineering, 60; Industrial Trainers, 60; Iraqi Tonal Studies, 139-140; Languages, 60; Medical Technology, Baghdad, 70; Melodic Studies, 139-140; Oil Training, 147; Physical Training, 57; Police, 145; Preparation of Industrial Trainers, Baghdad, 60; Public Administration, 61; Routes and Lines, 148

Institute of Technical Agriculture, Baghdad, 70; Maysan, 66-67; Sulaimaniyah, 70
Institute of Technical Medicine, Baghdad, 70; Mosul, 67; Sulaimaniyah, 69-70
Institute of Technology, 57-58; Babylon, 66; Baghdad, 61-63; Basrah, 65; Mosul, 67-68; Ta'mim, 66
Institute of: Traffic Police, 145; Wire Communications, 149; Wireless Communications, 149
International Center for Traditional Music Studies, 139-140
Iraqi Academy, 63
Iraqi Music and Ballet School, 140-141
Islamic Studies Religious College, 63

Jami'at Baghdad, 83-110
Jami'at Al-Basrah, 110-113
Jami'at Al-Mosul, 114-123
Jami'at Al-Sulaimaniyah, 127-128
Jami'at Salahaddin, 123-127
Judicial Institute, 145

Kufa University, 114

Labor Education: Authority, 146, Institute, 146

Melodic Studies Institute, 139-140
Military Academy, 142
Military College, 142; of Medicine, 142; of Technology, 142
Military School of Nursing, 141
Military Technical: College, 142; Institute, 142
Musical Instruments Workshop, 140
Mustansiriyah School, 71

National Center for: Consultation and Administrative Development, 147; Consultation and Management Development, 147
National Computer Center, 148
National Defense College, 142
National Institute: for Planning, 148; for Youth, 149
Naval (Iraqi): Academy, 142; College, 142

Oil Training Center, 147
Osool Al-Deen Religious College, 63

Paramedical Professions Higher Institute, 143
Police Academy, 145
primary nursing schools, 144

Queen Aliyah College, 64

Radio and Television Training Institute, 139
Regional Center for Conservation of Cultural Property, 140
Rehabilitation Center, 146
Reserve College, 142
Royal College of Medicine, 64

Salahaddin University, 123-127
Salahuddin University, 123-127
School for Social Workers, 146
School of: Agriculture, 138; Music and Ballet, 140-141; Nursing, 64
Shamash Secondary School, 16

Specialized Institute for Engineering Industries, 144
Staff College, 142
Sulaimaniyah University, 127-128

Teacher Training: College, 57; Institute, 57
Technical Institute, 146; Amarah, 64; Arbil, 64; Bani Sa'ad, 64-65; Basrah, 65; Diyala, 64-65; Hewega, 65; Hilla, 66; Kirkuk, 66; Kufa, 66; Kumait, 66-67; Kut, 67; Maysan, 64; Misayab, 67; Mosul, 67-68; Najaf, 68; Namrood, 68-69; Nasiriyah, 69; Ramadi, 69; Shatra, 69; Sulaimaniyah, 69-70; Ta'mim, 66
Technical Institute of Agriculture, Arbil, 70; Aski-Kelek, 70; Babylon, 67; Baghdad, 48, 70; Bani Sa'ad, 64-65; Diyala, 64-65; Hewega, 65; Kufa, 66; Kumait, 66-67; Kut, 67; Maysan, 66-67; Misayab, 67; Najaf, 66; Namrood, 68-69; Nineveh, 68-69; Shatra, 69; Sulaimaniyah, 70; Ta'mim, 65; Thikar, 69; Wasit, 67
Technical Institute of Management, Babylon, 66
Technical Institute of Medicine, Baghdad, 70; Mosul, 67-68; Sulaimaniyah, 69-70
Technical University, 129
Technological University, 129
Telecommunications Institute, 149
Tonal Studies Institute, 139-140
Traffic Institute, 145
Training Center: (Health), 144; (Trade), 148

University College, 70-71
University of: Al-Anbar, 83; Al-Bakr, 142; Al-Hikma, 51-52; Al-Mustansiriyah, 71-83; Anbar, 83; Baghdad, 83-110; Basrah, 110-113; Kufa, 114; Mosul, 114-123; Qadisiyah, 123; Salahaddin, 123-127; Salahuddin, 123-127; Sulaimaniyah, 127-128; Technology, 128-136; Tikrit, 136

Vocational Institute of Accountancy, Baghdad, 56; Mosul, 56
Vocational Training Center for Electrical and Electronic Industries, 146

War College, 142

Zafaraniya Technical Institute, 61-63

Glossary

'alim (pl. ***'ulama***). A learned man; an expert Islamic religious scholar; Islamic scholars in general.
al-buhuth. *See* ***bahth al-kharij***.
al-fiqih (also ***al-fickh***). Islamic studies.
al-hikma. Wisdom.
al-muqaddimat. Introductory studies (e.g., in Islamic studies).
as-sutuh. Intermediate studies (e.g., in Islamic studies).
awqaf (sing. ***waqf***). Islamic religious endowments.

bahth al-kharij (also ***al-buhuth***). Research and higher studies (e.g., in Islamic studies).
buzug. A musical instrument; a fretted lute with metal strings.

caliph. *See* ***khalifa***.

dafrug. A musical instrument; a tambourine.
djoze. *See* ***jawzah***.

faqih. An Islamic legal expert competent only in established jurisprudence.
fatwa. A legal opinion concerning *Shari'a*, expressed by a *mufti*.

hadiths. Deeds and sayings of the Prophet Mohammed which were reported by witnesses and handed down by tradition; one of the sources for the *Shari'a*.
Hanafi. An orthodox Sunni school of Islamic jurisprudence, especially in India, Iraq, and Turkey.
Hanafite. A follower of the Hanafi school.

ijtihad. Achievement (e.g., in research in Islamic jurisprudence).
imam. An Islamic prayer leader; in the Sunni tradition, one who leads prayers in a mosque; in the Shi'ite tradition, one of 12 divinely-appointed religious leaders of the family of Ali.

jawzah (also ***djoze***; ***joza***). A musical instrument; a four-stringed fiddle; the sound box is part of a coconut shell covered with skin.
joza. *See* ***jawzah***.

khalifa (also ***caliph***). A successor of the Prophet Mohammed.
khatib. One who delivers the *khutba* at a Shi'ite mosque during Friday prayers.
khutba. In the Shi'ite tradition, a sermon given by a *khatib* at the mosque during Friday prayers.
Koran. *See* **Qur'an**.

liwa. Governorate; an administrative district similar to a state or province in North America.

maqam. Traditional Iraqi music.
mu'adhdhan (also ***muezzin***). One who delivers the call to prayer from the minaret of a mosque.
muezzin. *See* ***mu'adhdhan***.
mufawaddh. Commission (e.g., as a police officer).
mufti. An expert in *Shari'a* competent to give a *fatwa* on matters not covered in the Islamic law books.
mujtahid. A specialist in *Shari'a*; a religious teacher and adviser recognized as competent to give an authoritative answer to legal questions; in the Shi'ite tradition, a *mujtahid* may also have civil authority.

mullah. A learned teacher of *Shari'a* and doctrines; the chief religious leader in an Islamic village; the teacher in a primary-level mosque school.

nay. A musical instrument; a flute or fife without a mouthpiece.

oud. *See **ud***.

qadi. An Islamic religious judge; one who administers *Shari'a* and issues decisions in specific cases.

qanun. A musical instrument; a stringed instrument, similar to the zither, with a shallow trapezoidal sound box, set horizontally before the player.

Qur'an (also **Koran**). The holy book of Islam.

santur. A musical instrument, similar to a dulcimer.

sayyid (also ***sharif***). A man of outstanding achievement or noble lineage; a descendant of the Prophet Mohammed.

Shafi. A Sunni legal school, especially among the Kurds.

Shafite. A follower of the Shafi school.

shahadatul 'alimiyah. Certificate of knowledge (i.e., in Islamic jurisprudence).

Shari'a. Islamic religious law; it governs civil, criminal, domestic, economic, ethical, political, religious, social affairs in Islamic countries; it may be supplemented by customary law, civil legislation, and administrative decisions.

sharif. *See **sayyid***.

sheik. The head of an Arab family, clan, tribe, or village; a religious leader or scholar; a form of respectful address.

Shi'ah. The branch of Islam which considers Ali to have been the first legitimate successor of the Prophet Mohammed.

Shi'ite. Member of the Shi'ah branch of Islam.

sunnah. Islamic custom derived from the *hadiths*.

Sunni. The branch of Islam which follows the sunnah and acknowledges the first four *khalifs* as legitimate successors of Mohammed.

Sunnite. A member of the Sunni branch of Islam.

tabla. A musical instrument; a drum, similar to a tom-tom.

ud (also ***oud***). A musical instrument; a lute; a five-to-seven string pear-shaped, short-necked, fretless, guitar-like instrument.

'ulama (sing. ***'alim***). Learned men; Islamic leaders in general.

waqf (pl. ***awqaf***). In *Shari'a*, an endowment of property to be held in trust for a charitable or religious cause.

Useful References

Much of the documentation for this volume is derived from the following sources not listed below: reference books, university catalogs, mimeographed sheets from academic institutions, sample educational credentials, and interviews with educators in Iraq.

The following references provided some statistical information as well as variations in institutional names. Publisher addresses are included.

International Handbook of Universities and Other Institutions of Higher Education. 10th ed. New York: Stockton Press, 1986.

Address: Stockton Press, 15 East 26th St., New York, NY 10010.

International Nursing Foundation of Japan. *Nursing in the World: The Needs of Individual Countries and Their Programmes*. 2d ed. Tokyo: International Nursing Foundation of Japan, 1986.

Address: International Nursing Foundation of Japan, 1-32, 4-chome, Kudankita, Chiyoda-ku, Tokyo, Japan.

Parker, Orin D., and Parker, Garland G. *Iraq: A Study of the Educational System of Iraq and a Guide to the Academic Placement of Students in Educational Institutions of the United States*. Washington, D.C.: American Association of Collegiate Registrars and Admissions Officers, 1966.

Address: Available from University Microfilms International, Box 1467, Ann Arbor, MI 48106 or from ERIC/HE, One Dupont Circle, Suite 630, Washington, DC 20036. (Out-of-print)

Schmida, Leslie C., ed. "Iraq." In *Education in the Middle East*, pp. 33-37. Washington, D.C.: America-Mideast Educational & Training Services, Inc., 1983.

Address: America-Mideast Educational & Training Services, Inc., 1100 17th St., Suite 300, Washington, DC 20036.

The World of Learning. 37th ed. London: Europa Publications Ltd., 1987.

Address: Europa Publications Ltd., 18 Bedford Square, London, WC1B 3JN, England.

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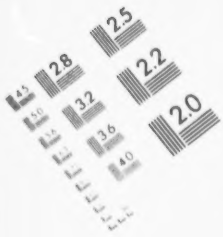
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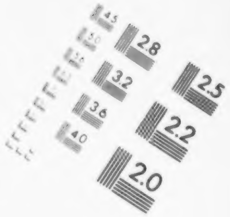
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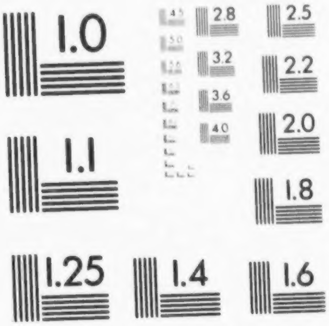
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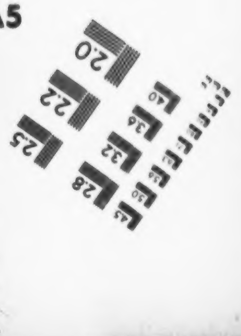
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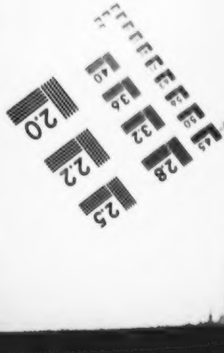
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